











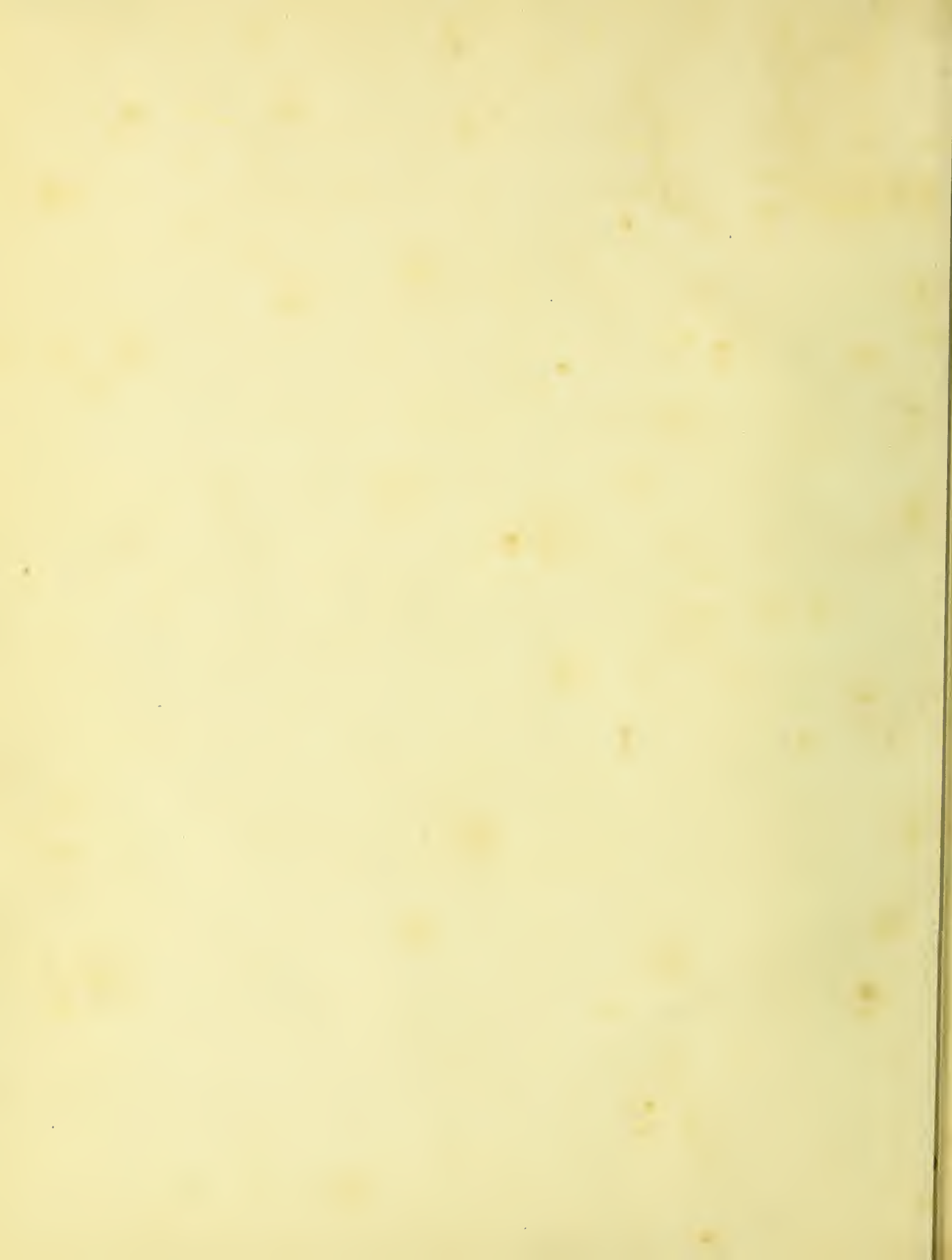
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# SPECIES CONCHYLIIORUM,

OR

CONCISE ORIGINAL DESCRIPTIONS AND OBSERVATIONS  
ACCOMPANIED BY FIGURES

OF ALL THE

# SPECIES OF RECENT SHELLS,

WITH THEIR VARIETIES.

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Vol. I.—Part I. containing

A MONOGRAPH OF THE GENUS CYMBA,

By W. J. BRODERIP, Esq., F.R.S., L.S., &c. V.P.G.S.

AND

MONOGRAPHS OF THE GENERA

ANCILLARIA, OVULUM AND PANDORA,

By G. B. SOWERBY, F.L.S., &c.

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INTRODUCTION  
TO THE  
MONOGRAPHS OF THE GENERA  
**CYMBA, MELO, AND VOLUTA,**

*By* W. J. BRODERIP, *Esq.*, *F.R.S. and L.S.*, &c., *V.P.G.S.*

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THE genus *Voluta* of Linnæus contains forty-five species, and consists of testaceous Mollusca, varying essentially in their form, their habits, and their geographical distribution. Some are marine; others are the inhabitants of marshes and the banks of rivers; some have opercula, others have none. The shells of some are covered with an epidermis; others are without that covering. Some breathe air, and would perish in water; others breathe only through the medium of water. Some are carnivorous; others feed on plants. The base of the shells in some is entire, in others it is notched; in short, plaits on the pillar of the shell form the leading distinction of a Linnean *Voluta*,\* and the species recorded in the *Systema Naturæ* are widely diffused in regard to climate, both in the Old and the New World.

The genus is divided by Linnæus into five sections. The first consists of Mollusca with Shells, the aperture of which is entire; and of this section *Voluta Auris Midæ*, Linn., (*Auricula Midæ*, Lam.) and *Voluta Solidula*, Linn., (*Tornatella solidula*, Lam.) may be taken as examples.

The next section consists of the “*Cylindroideæ*,” and of this, *Voluta porphyria*, Linn., (*Oliva porphyria*, Lam.) may be taken as an example: indeed, this section, which contains but three species, consists entirely of the genus *Oliva*, Lam. Then come the “*Ovatæ*,” consisting of the genera *Marginella*, *Columbella*, *Cancellaria*, *Volvaria*, and a small part of the genus *Mitra*, Lam. We are next presented with the “*Fusifformes*,” consisting of the genera *Mitra*, *Turbinella*, and a part of *Voluta*, Lam.; and

The last section, the “*Ventricosæ*,” is composed of another part of the genus *Voluta*, Lam., (*Les Gondolières*) which portion has been divided by the author of this Monograph, and affords many of the species of the genera *Cymba* and *Melo*.†

This statement refers to the genus *Voluta* as left by Linnæus in the last edition of the *Systema Naturæ*;‡ but, in Gmelin’s edition§ the number of species is increased to one hundred

\* *Volutæ* genus facillimè distinguitur columella plicata. *Syst. Nat.* p. 1195, ed. 12.

† See Sowerby’s *Genera of Recent and Fossil Shells*, No. 28.

‡ The 12th.

§ The 13th.



and forty-five; and the additions will all bear the test laid down by Linnæus as characteristic of the genus *Voluta*, for they have all plaits on the pillar of the shell.

With all the veneration with which the name of Linnæus impresses us, it is impossible not to feel that there is justice in the following strictures by Lamarck, “ Le genre *Voluta* de Linné, “ quoique caractérisé d’une manière assez distincte, d’après la considération de l’existence des “ plis sur la columelle de la coquille, est tres peu naturel; car il réunit des coquillages de familles “ différentes qu’il faut distinguer, séparer et écarter, parce qu’elles ne s’avoisinent point. Il “ comprend effectivement des coquilles à ouverture cutière, comme les Auricules; d’autres à “ ouverture canaliculée à la base, comme les Fasciolaires et les Turbinelles qui avoisinent les “ Rochers; enfin, d’autres encore dont l’ouverture est simplement échancrée à sa base, comme “ celle des buccins, etc.: ce qui lui donne une étendue extrêmement considérable, nuisible à “ l’étude des espèces, et défectueuse à l’égard des rapports entre les objets réunis.”\*

If any disciple of Linnæus should be disposed to consider the French naturalist somewhat severe, let him remember that, at the time when Lamarck wrote, the number of recent species of *Volutæ*, strictly Linnean, had increased from forty-five to two hundred and eighty-eight.†

Since the appearance of Lamarck’s Work, the researches of naturalists have brought to light such numbers to swell the catalogue, that the species of many of these genera are increased two-fold, and even three-fold. Lamarck then may be pardoned for declaring that the extent of a genus comprehending all these heterogencous Testacea, is “ nuisible à l’étude des espèces “ et défectueuse à l’égard des rapports entre les objets réunis.”

Bruguières was the first effectual reformer of this disordered state of things, and he separated from this genus, over-grown even in his time, all those species which were without a notch at the base. Lamarck carried the reformation further, and separated from it the genera *Mitra*, *Columbella*, *Marginella*, *Cancellaria*, and *Turbinella*, leaving only those shells which constitute his genus *Voluta*, an assemblage of *Trachelipoda* all marine, carnivorous, and breathing through the medium of sea-water only; with plaits on the pillar of the shell, and a notch at its base, but destitute of an operculum. Of the genus thus modified, Linnæus recorded only seven species, Lamarck has published forty-four; and the readers of this work will see what a number of new species has enriched our cabinets since the appearance of Lamarck’s work.

The genus *Voluta* as left by Lamarck, has undergone a still further division into the genera *Cymba*, *Melo*, and *Voluta*; and we are now about to present to the reader a Monograph of the first of these genera.

Before, however, we proceed to a consideration of the genus *Cymba*, it may be satisfactory, in the midst of the difficulties which a conchologist has to encounter, to mark the progress of knowledge arising from the information which even the exuvia of Testacea, when received in a natural state, throw upon his studies. The seventh Volume of the *Animaux sans vertèbres* was published in August, 1822; and Lamarck there says of his genus *Voluta*, “ Les

\* Lam. Anim. sans vertèbres, Tom. VII, p. 327.

† Viz. *Voluta*, Lam., 44, *Mitra*, 80. *Marginella*, 22. *Turbinella*, 25. *Columbella*, 18. *Auricula*, 14. *Cancellaria*, 12. *Tornatella*, 6. *Volvaria*, 5. *Oliva*, 62.



“ espèces sont en général lisses, brillantes, et il ne paraît pas qu’aucune d’elles soit pourvue de “ drap marin.”\* ”

A careful collection of the shells of these Testacea has enabled the author to state from actual experience that the majority of species recorded by Lamarck are provided with the “ drap marin;” and he is induced to believe that few, if any, of the species of *Cymba*, *Melo*, or *Voluta*, are entirely without it. The species of *Cymba* have not only this drap marin, but also the additional protection of a glaze, or vitreous pellicle, more or less extended over the shell. This last is increased as the animal advances in age; and, in some species, as in *Cymbæ proboscidalis*, *porcina*, *rubiginosa*, &c. forms a complete surtout, which, in old specimens, has such an appearance as has led more than one uninitiated spectator to inquire whether a thick coating of enamel had not been poured over the shell.

But the want of the soft parts is forcibly felt by the conchologist who aims at a higher object than giving a name to a new species. Till we have an opportunity of observing these animals, till we have them under the dissecting-knife, their proper place in the scheme of nature can never be satisfactorily known, and our best attempts at placing them according to their exuviæ will be the result of little more than conjecture; but an intimate acquaintance with their anatomy, as adapted to the construction of the shell, and a knowledge of their habits of life, would dispel much of the obscurity which still hangs over the animal economy of the testaceous Mollusca, and would afford materials for general conclusions.

Much, indeed, has been said by Comparative Anatomists, but a great deal remains undone; and however reluctant our vanity may be, to leave the subject on which we are employed open to the correction and improvement of those who will come to the elucidation of it with increased knowledge, we must be content to add the little light which our information enables us to give, and cheerfully to labour according to our strength in clearing the path for those who are to come after us. These Monographs are produced with any feeling but that of infallibility, and the errors of the Author will serve as landmarks to warn those who may hereafter embark in the same inquiry.

\* Anim. sans vertèbres, Tom. VII, p. 328.



## CYMBA.

*Testa levis, admodum ventricosa. Epidermis lævis, fusca, tegmine quasi vitreo partim vel omnino obducta. Apex rudis. Spira brevissima. Columella curva, 2-4 plicata, plicis magnis, acutis. Labium externum haud reflexum. Basis profundè emarginata. Apertura hians.*

*Caput grande, planum, tentaculis remotis, oculis pone tentacula positis. Pallium magnum. Pes maximus. Operculum nullum. Animal carnivorum.*

*Habitat marinum in calidioribus mundi veteris regionibus.*

OBS. The genus *Cymba* seems to form a natural group of testaceous Mollusca, the shells of which are marked by very strong characters; for these are ventricose, sombre, and, for the most part, uniform in colour, and the apex of the spire is so rudely fashioned, that in the greater part of the species, it may be said to be almost shapeless. The shells are covered with a smooth brown epidermis, which is, in adult individuals, more or less coated, (in some instances entirely) with a vitreous covering or enamel-like glaze, probably secreted by the mantle. The columella is curved, and the base deeply emarginate. The food of these marine Trachelipoda consists of animal substances: they are inhabitants of warm climates, and there is no direct evidence that one of the genus has been found in the New World, if we confine the meaning of that term to America and its Islands; neither is the author aware that any of the shells of this genus have been found in a fossil state.

Some explanation may be necessary to account for the adoption of the generic name *Cymba* instead of *Cymbium*, which is used by many of the continental writers to distinguish the Gondolières of Lamarck (*Cymba* and *Melo*, *nob.*). Klein, Adanson, and Denys de Montfort describe, it is true, a genus *Cymbium*. But Adanson employed the term in 1757, to distinguish a genus, which, from the extreme simplicity of the structure of the shell, he places at the head of the univalves, and which, under no system, could be deemed even an approach to a turbinated shell with plaits on the pillar. Denys de Montfort, in 1810, designates by the term *Cymbium* a genus, of which he makes *Voluta Æthiopica*, *Auct.* (*Melo Æthiopicus*, *nob.*) the generic type: nor does he mention any other species. Klein, indeed, calls Adanson's *Yet*, "*Cymbium*," but Gualtieri had used the word in 1742 (eleven years before Klein published his "*Tentamen*") as a generic name for the *Argonautæ* of Linnæus. It may be added, that De Blainville, in his "*Malacologie*," figures *Cymba Cymbium* (*Voluta Cymbium*, *Auct.*) as an illustration of De Montfort's genus. De Montfort, who figures *Melo Æthiopicus*, as his example, gives the following as one reason for separating the genus from *Voluta*, "*le mamelon de leur Coquille est particulier.*" The apex of *Melo* is indeed regularly and beautifully fashioned; but that of *Cymba* is almost a shapeless mass.

Since the publication of the genus *Cymba* in Sowerby's "*Genera*," the author has observed that term applied by M. M. Quoy and Gaimard, who have so much enriched the catalogue of marine animals, to a genus of naked Mollusca. He regrets this coincidence of names, but, adhering to the rule of priority, sees no reason for making any alteration.



## CYMBA NEPTUNI. Fig. 2. a. b. c. d.

*C. testâ obovatâ, ventricosâ-tumidâ, rufo-fuscescente, anfractûs basalîs limbo apicem oblitteratum prætereunte, carinato, subreflexo; columellâ 4-plicatâ.*

Obs. In junioribus et præcipue in pullis, testa tenuis, fusco-rufescens albo nebulata, et apex rudis penitus exsertus.

Syn. *Voluta Neptuni*, Gmel. *Voluta Auguria?* Soland. MSS., Port. Cat. p. 64, lot. 1448.

Icon. testæ adultæ, fig. 2. d. *List. Conch.*, t. 802, f. 8. *Adanson, Senegal*, pl. 3, f. 1, L'Yet. *Gualt. Test.* t. 27. *Seba, Mus.* 3. t. 64, f. 3 et t. 65, f. 3. *Martini, Conch. Cab.* 3, t. 71, f. 767. *Wood, Index Testac.* t. 21, f. 181.

Icon. testæ junioris, fig. 2, a. b. c. *List. Conch.*, t. 795, f. 2. *Seba Mus.* 3, t. 65, f. 7 et t. 66, f. 4. *Encyclop.* t. 386, f. 1.

Icon. pulli (*Voluta Navicula*, Gmel.) *Sowerby, Genera* (Cymba f. 1, Cymba Neptuni). *List. Conch.* t. 795, f. 2. *Seba, Mus.* 3. t. 64, f. 10, 11. *Martini, Conch. Cab.* t. 71, f. 768, 769. *Wood, Ind. Test.* t. 21, f. 182.

*Hab.* in Oceano Africano, juxta littora.

DESC. Shell obovate, tumid, ventricose, of a brownish red, covered with a strong brown epidermis, over which an enamel-like glaze is extended from the pillar over about a fourth part of the shell, leaving the epidermis of the back uncoated. In full grown specimens the spire and apex are entirely concealed, and the upper border of the body whorl, which is carinated and somewhat reflected, overhangs both, so as to form an open, somewhat round concavity. The pillar is four plaited.

In younger individuals and especially in those lately produced, the shell is thin, of a brownish red mottled with white, and the rude apex of the spire appears entirely uncovered.

## CYMBA TRITONIS. Fig. 3. et 3. a. b.

*C. testâ ovato-tumidâ, elongatâ, pallente, anfractûs basalîs limbo apicem rotundum supereminente subreflexo; columellâ triplicatâ.*

Obs. Juniores colore virente-fusco gaudent.

Icon. fig. 3. et 3. a. *Seba, Mus.* t. 64, f. 3.?

Var. fusca, testa forsan junior et nana.

Icon. fig. 3. b.

*Hab.* in Oceano Africano.

DESC. Shell ovate, tumid, elongated, pale-brown or whitish, covered with a brownish epidermis, over which an enamel-like glaze extends from the pillar about as far as it does in Cymba Neptuni. The rounded apex of the spire in full grown individuals is very nearly concealed, and is over-hung by the border of the spire and body-whorl, so as to present the appearance of a shallow winding excavation, (at the bottom of which the tip of the apex may be discerned,) differing entirely in character from that which is observed in Cymba Neptuni; the aperture is much less patulous; and the whole shell is more symmetrical and melon-like.

## CYMBA PATULA. Fig. 4 et 4 b.

*C. testâ tumidâ labium versus gibbâ, brunneo-rubente, anfractûs basalîs limbo excavato, subreflexo, apicem subrotundum exsertum vix prætereunte; columellâ 4-plicatâ; aperturâ valdè patulâ.*

Icon. fig. 4. et 4 b.

*Hab.* in Oceano Africano, juxta littora.

DESC. Shell tumid, gibbous towards the outer lip, brownish red, covered with a brownish epidermis, partially coated, as in the last species, with an enamel-like glaze. The spire is excavated and open, the rounded apex partly apparent, and the upper border of the body-whorl carinated, and somewhat reflected. The pillar, which has four plaits, is straighter than that of Cymba Neptuni and Cymba Tritonis, and the aperture from the gibbous extension of the outer lip is very wide. The shells of all the individuals of this species seen by the author have the appearance of being full-grown, and are very much inferior in size to the two species last described.

## CYMBA PROBOSCIDALIS. Fig. 5, a. b, c, d.

*C. testâ elongatâ, ventricosâ-cylindrâcedâ, pallidè fulvâ, anfractûs basalîs limbo apicem oblitteratum prætereunte, producto, patulo, carinato, subreflexo; columellâ 4-plicatâ.*

Obs. In ætate propectis, testa tegmine vitreo penitus adoperta.

Apex in junioribus exsertus, subglandiformis.



*Hab.* in Oceano Philippino, *Lam.* In Oceano Africano, juxta littora, *G. B. S.*

*Syn.* *Voluta proboscidalis*, *Lam.*

*Icon. testæ adultæ*, fig. 5. d. *Sowerby, Genera*, (*Cymba*, fig. 3, *Cymba proboscidalis*,) *List. Conch.*, t. 800. fig. 7. *Encyclop.* t. 389, fig. 2.

*Icon. testæ junioris*, fig. 5, c.

*Icon. Pulli* (nonne *Voluta papillaris* et *Voluta Glans*, *Gmel.?*) fig. 5, a, b. *Seba, Mus.* 3, t. 64, fig. 9 et t. 66, fig. 13, 14, 16. *Chemn.*, 10, t. 148, f. 1393, 1394.

**DESC.** Shell elongated, somewhat cylindrical, but ventricose towards the middle, reddish yellow, which becomes paler in full-grown specimens, covered with a dark brown epidermis, which is entirely coated in adults with the enamel-like glaze. The spire and apex are almost entirely obliterated in full-grown individuals, and the reflected upper border of the body-whorl exposes a wide, somewhat excavated, snout-like area, from which the species obtains its name. The pillar has four plaits, the last being comparatively small. The shell grows to a large size. The author possesses a shell of this species, to which numerous *Coronulæ* (*Chelonobiæ*, *Leach*,) and *Crepidulæ* are attached. The animal has buried the majority of these adhesions under the thickest coat of enamel-like glaze hitherto observed on the shell of the species.

#### CYMBA PORCINA. Fig. 6. a. b. c. e. g. h. i. k.

*C. testá subcylindricá, pallidè fuscá; anfractús basalis limbo apicem subobsoletum vix supereminente, patulo, tantum non plano, subcarinato; columellá buplicatá.*

*Obs.* Apex in junioribus exsertus.

*Syn.* *Voluta porcina*, *Lam.*

*Icon. testæ adultæ*, fig. 6, g, h, i, k. *Adans. Seneg.* t. 3, fig. 2. (Le Philin.) *Seba, Mus.* 3, t. 65, fig. 5, 6, et t. 66, fig. 5. *Martini, Conch. Cab.* 3, t. 70, fig. 764. *Encyclop.* t. 386, fig. 2. *Wood, Ind. test.* t. 21, fig. 179.

*Icon. testæ junioris*, fig. 6, c, e.\*

*Icon. pulli*, fig. 6, a, b.

*Hab.* in Oceano Africano juxta littora. (Senegal.)

**DESC.** Shell subcylindrical, whiteish, covered with a thin ash-coloured epidermis, which is coated by a silvery enamel-like pellicle, extending over about two-thirds of the shell. The apex is more visible than in *Cymba proboscidalis*, but the spire is entirely concealed. The upper border of the body-whorl is less reflected than it is in that shell, and the area, though very open, is less excavated. In fine specimens the aperture is of a rich brown colour. The plaits on the pillar are only two. The shell is very inferior in size to that of *Cymba proboscidalis*.

\* The shells represented at fig. 6, d, f, are perhaps varieties of *Cymba porcina* in a young state, or they may be *Cymba proboscidalis* in an intermediate stage of growth.

#### CYMBA RUBIGINOSA. Fig. 7, a, b, c, d.

*C. testá elongatá, subcylindricá, pallidá, anfractús basalis limbo apicem subobliteratum supereminente; columellá triplicatá; fauce rubiginosá.*

*Obs.* In ætate propectis, testa tegmine vitreo penitus adoperta: in junioribus apex subconicus exsertus.

*Syn.* *Voluta rubiginosa*, *Swainson.*

*Icon. testæ adultæ*, fig. 7, c, d.

*Icon. testæ junioris*, fig. 7, a, b. † *Swainson, Exot. Conch.* (*Voluta rubiginosa*.) An *Martini, Conch. Cab.* 3, t. 70, fig. 765?

*Hab.* in Oceano Australi?

**DESC.** Shell elongated, irregularly cylindrical, pale, (except on and near the pillar and in the aperture, where it is of a rich rusty brown) covered with a delicate pale brown epidermis, which is entirely coated in old individuals with a brown enamel-like glaze. The apex of the shell is almost obliterated, and the border of the spire and body-whorl, which is less sharp than in the species already described, is produced somewhat beyond it, exposing a rounded excavated area, deeper, but much more contracted than that of the shell of *Cymba porcina*. The pillar is three-plaited.

† The shells represented at fig. 7, a, b are different individuals.



In younger individuals the subconical apex, together with the spire, is exposed, and the upper edge of the border of the body-whorl, which is sharper than it is in old specimens, does not project beyond them; neither does the enamel-like glaze, which in this stage of growth is thin and silvery, cover more than two-thirds of the shell.

#### CYMBA OLLA. Fig. 1, a, b, c, d.

*C. testâ ovatâ, ventricosâ, pallidè luteo-fulvâ; spirâ brevi, canaliculatâ, apice subconico, exserto; columellâ 2-plicatâ.*

Syn. *Voluta Olla*, Linn. et Auct.

Icon. testæ adultæ, fig. 1, b, d. *Swainson, Exot. Conch.* (*Voluta Olla*.) *Gualt. test.* t. 29, fig. A, *Favanne, Conch.* t. 28, fig. c, 1. *Knorr, Delic.* 6, t. 22, fig. 2. *Martini, Conch. Cab.* 3, t. 71, fig. 766. *Encyclop.* t. 385, fig. 2. *List. Conch.* t. 794, fig. 1. *Wood, Ind. test.* t. 21, fig. 180.

Icon. varietatis fasciâ pallidiorè,\* fig. 1, c.

Icon. pulli, fig. 1, a.

*Hab.* in Mari Mediterraneo (Gibraltar.)

DESC. Shell ovate, ventricose, pale fulvous, covered with a thin pale brown epidermis, which is coated with an enamel-like glaze from near the pillar to about two-thirds of the shell. The subconical apex is exposed as well as the spire, which last, together with the upper part of the body-whorl, is rounded and deeply channelled. Pillar with two plaits.

\* Favanne (Append. pl. 2, fig. II.) gives a representation of a variety marbled with white: I have never seen this variety. Lamarck's "var. labio dilatatissimo, extus sulco transversali distincto," for which he quotes Lister, t. 794, f. 1, is probably only accidental, in consequence of some derangement in the collar of the animal.

#### CYMBA GRACILIS. Fig. 8, a, b, c, d.

*C. testâ subcylindricâ, albo rufoque nebulosâ; spirâ sub-excavatâ, apice subglandiformi conspicuo; labii limbo spiram versus inflexo; columellâ 4-plicatâ.*

Icon. fig. 8, a, b, c, d.† *Martini, Conch. Cab.* 3, t. 71, f. 762.

*Habitat?*

DESC. Shell subcylindrical, clouded with white and reddish. The spire somewhat excavated, and the subglandiform apex conspicuous. The area much less, and the channelling much shallower than in *C. Cymbium*: the pillar, which has four plaits, much straighter, the aperture narrower, and the whole shell more slender and symmetrical. The sharp upper border of the lip is very much inflected towards the spire, and the shell is covered with a thin brown epidermis, which is coated with the enamel-like glaze for about one-third of the shell, beginning near the pillar. There is reason for concluding that in very old specimens this coating extends much further.

† The shell figured 8, c, d, is possibly a variety, but its bad condition does not permit a decisive opinion.

#### CYMBA CYMBIUM. Fig. 9, a, b, c, d.

*C. testâ subovatâ, albo rufoque marmoratâ; spirâ canaliculatâ, carinatâ, apice subglandiformi, conspicuo; columellâ 3-plicatâ.*

Syn. *Voluta Cymbium*, Linn. et Auct.

Icon. testæ adultæ, fig. 9, c, d. *Sowerby, Genera*, (*Cymba*, fig. 2, *Cymba Cymbium*.) *List. Conch.* t. 796, fig. 3. *Gualt. test.* t. 29, fig. B. *Adans. Scenog.* t. 3, fig. 1. *Seba, Mus.* 3, t. 65, fig. 8, 9. *Martini, Conch. Cab.* 3, t. 70, fig. 763, *Encyclop.* t. 386, fig. 3, a, b. *Wood, Ind. Test.* t. 21, fig. 173.

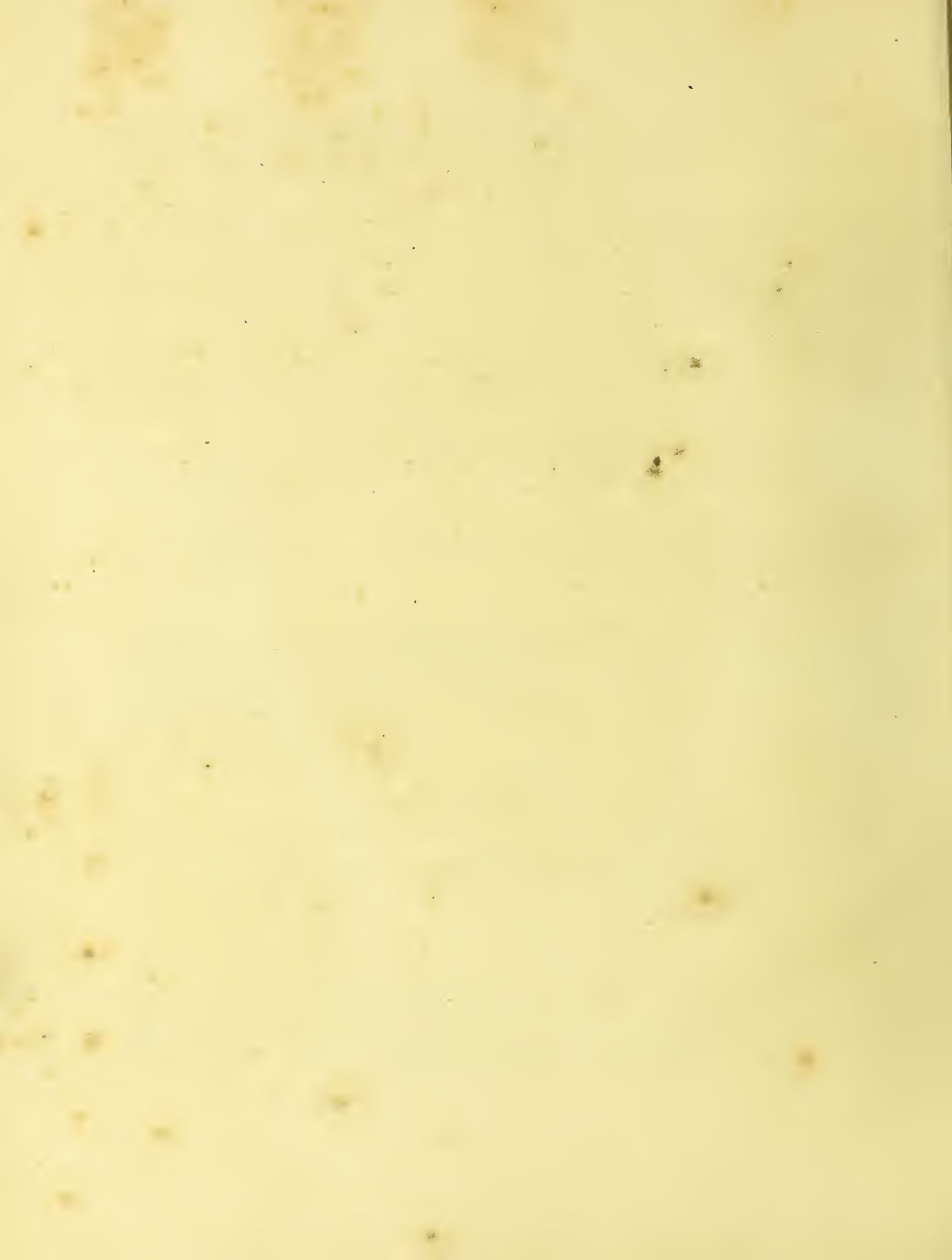
Icon. testæ junioris epidermide obtectæ, fig. 9, b.

Icon. pulli, fig. 9, a.

*Habitat* in Oceano Africano.

DESC. Shell irregularly ovate, marbled with white and brownish red, covered with a thin brown epidermis, which is coated for about one-third of the shell with the enamel-like glaze, which takes its commencement near the pillar. The spire is deeply channelled and carinated, exposing the subglandiform apex, and forming with the subreflected sharp upper border of the body-whorl, a wide spiral excavation. The upper edge of the outer lip recedes from the spire. The pillar, which is very much curved, has three plaits, and is bordered on the basal half with a rich chesnut longitudinal band.

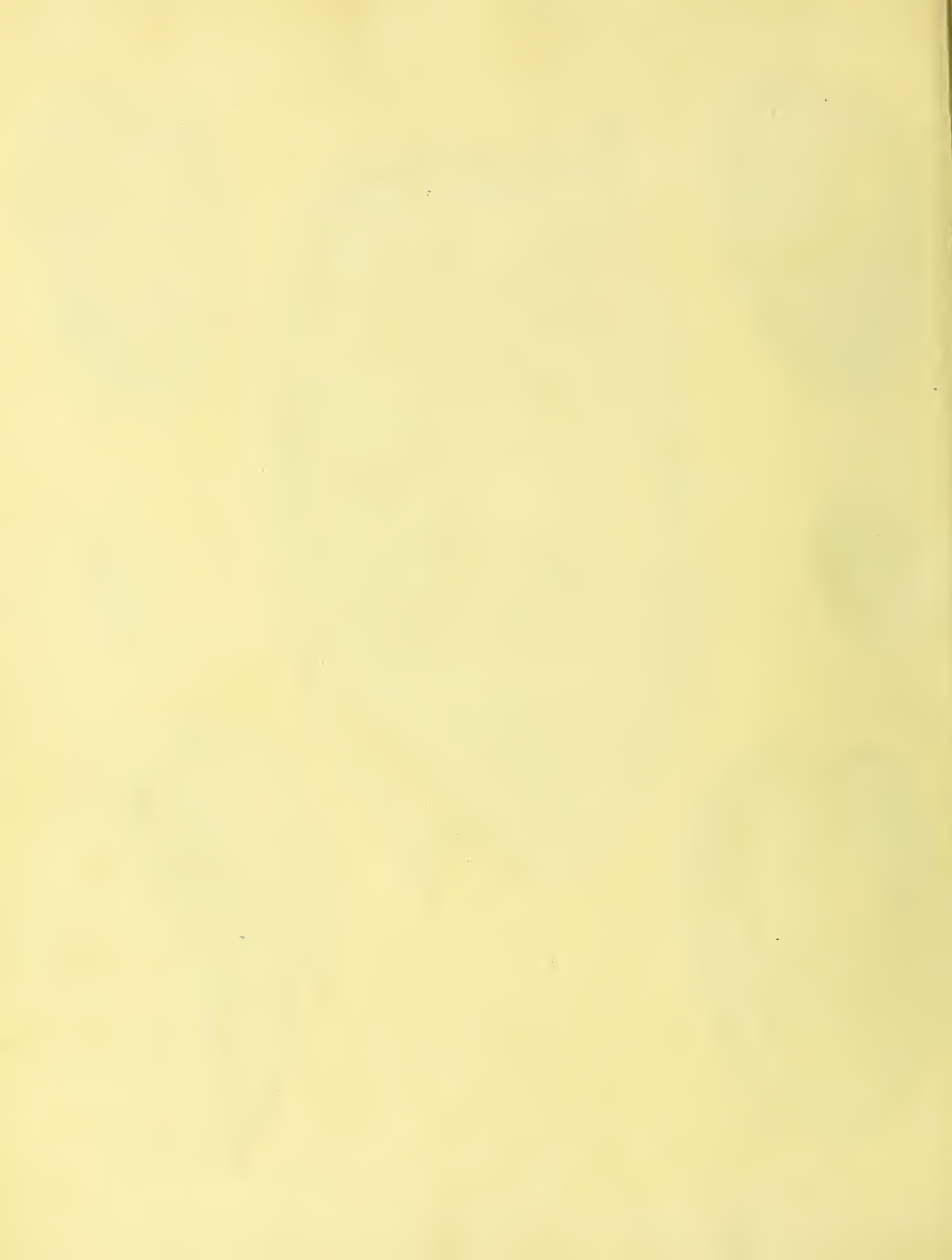




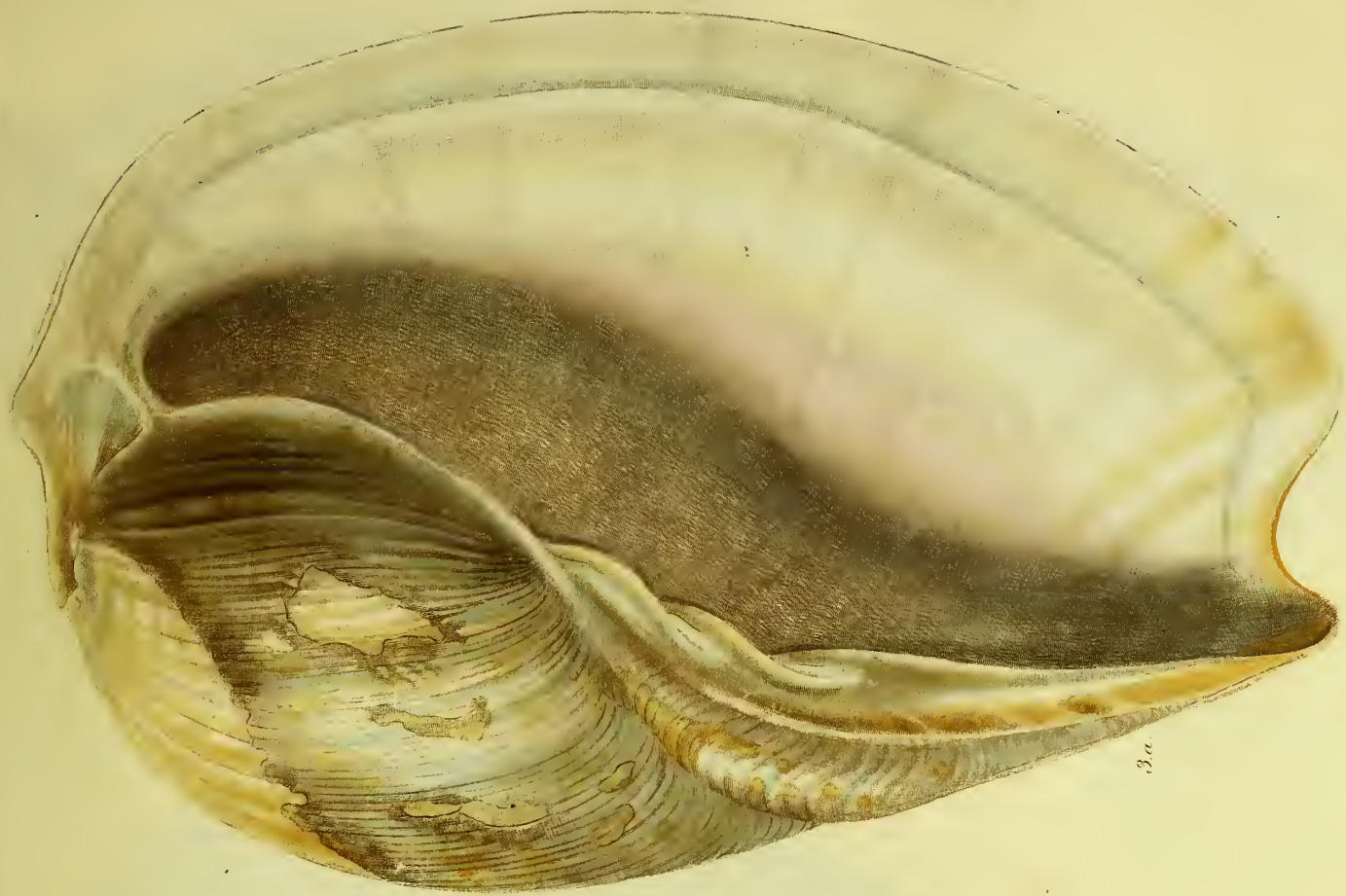


CYMBA.















5 d.



2 d.







2.a.



7.c.



7.d.



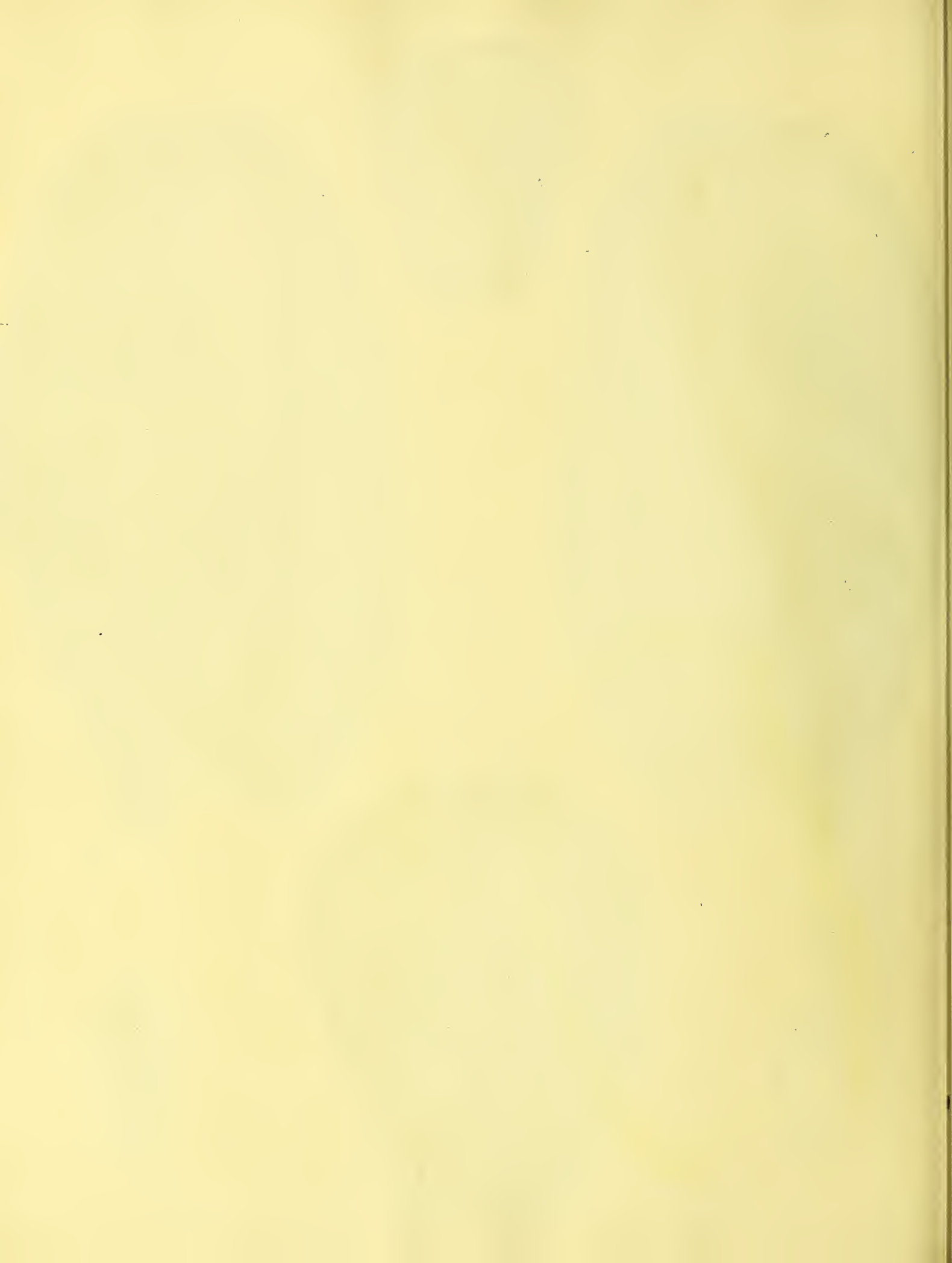
2.b.



5.a.



5.b.





CYMBA.



6.g.



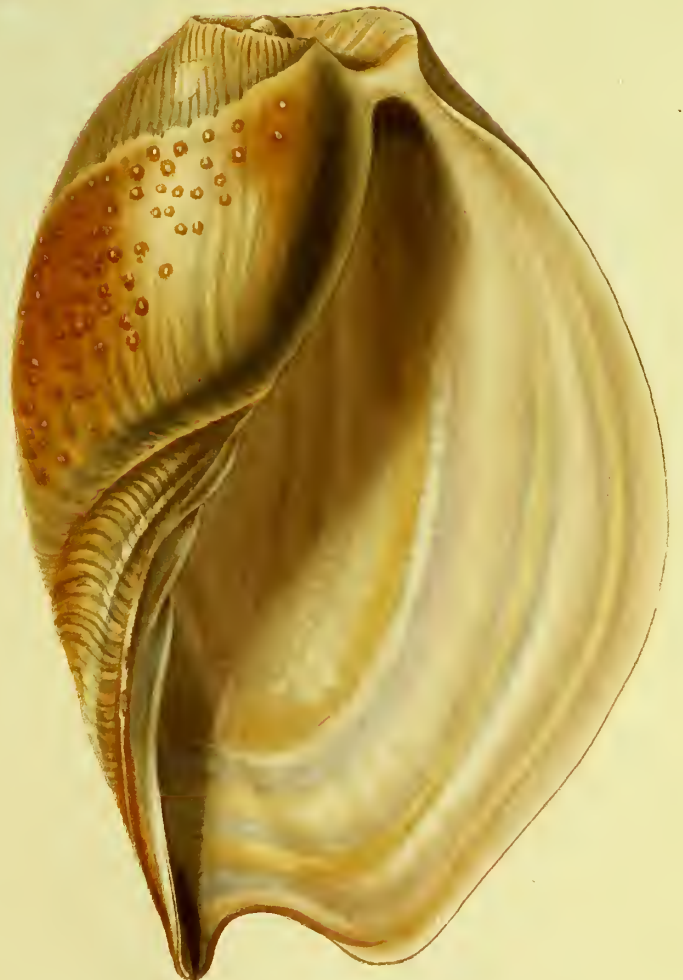
6.i.



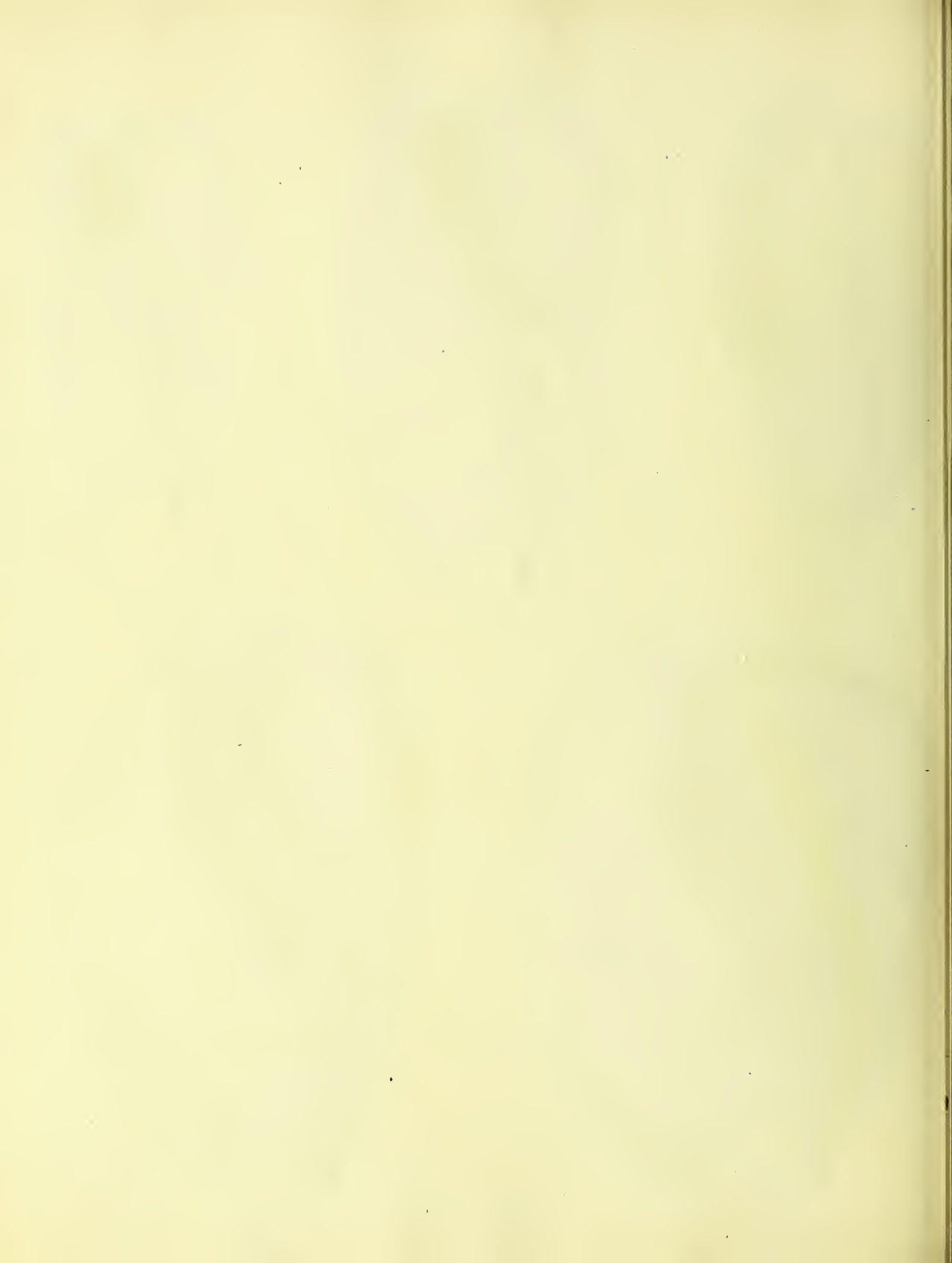
6.h.



2.c.



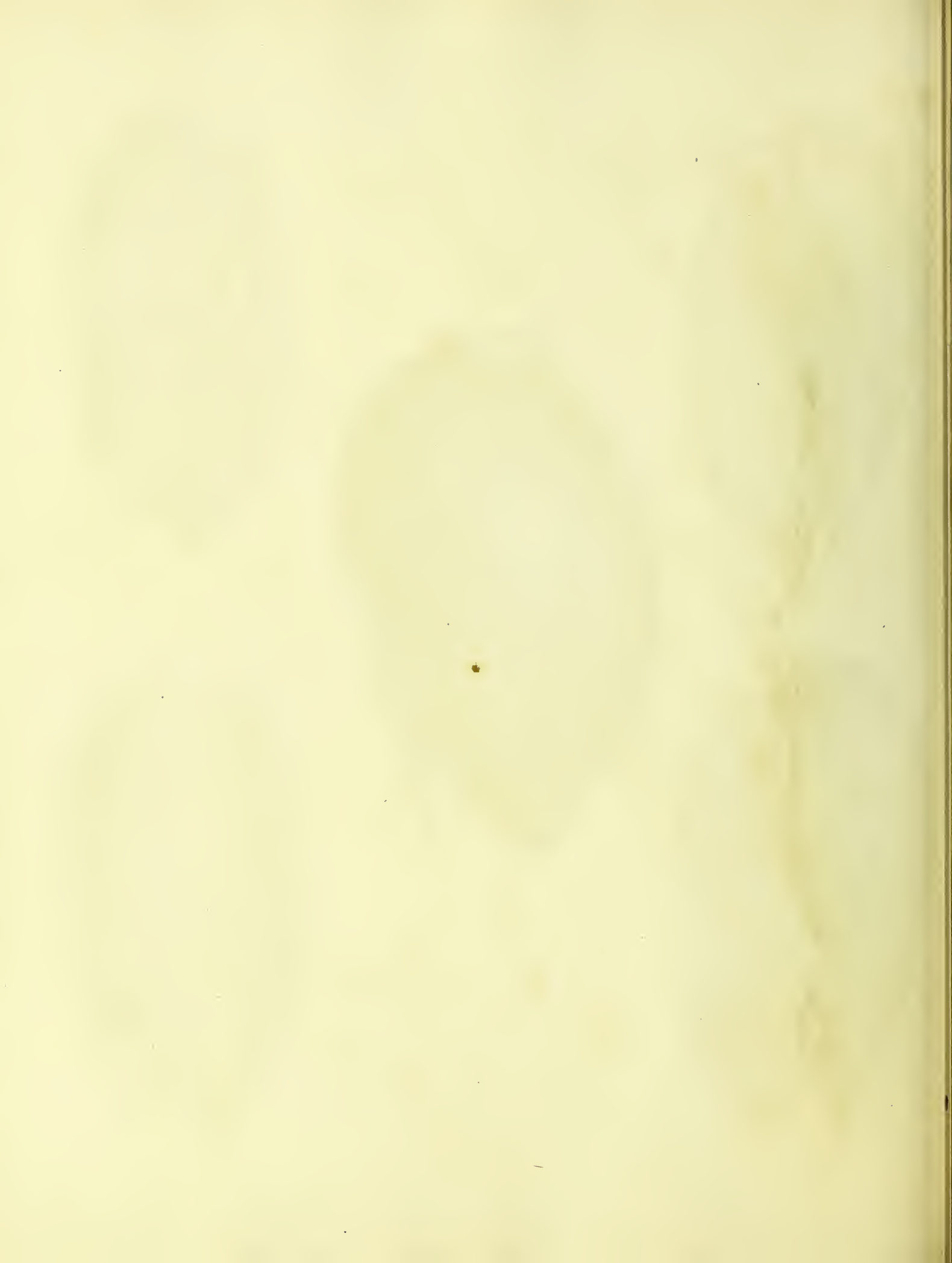
4.





CYMBA.







CYMBA.



6.a.



6.c.



6.b.



8.b.



8.a.



6.d.



6.f.



6.e.







6b.



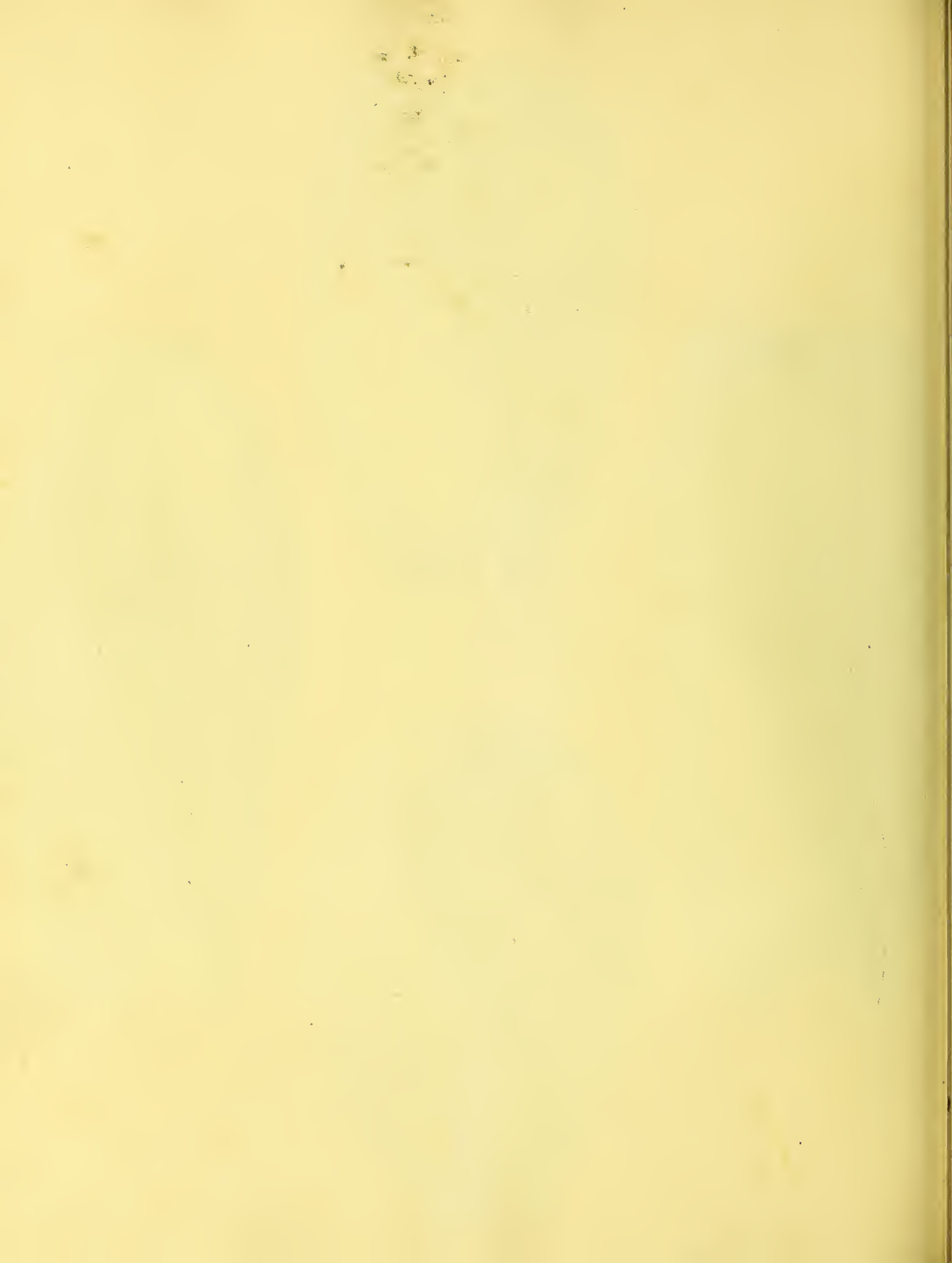
9a.



5c.



3b.





## ANCILLARIA.

ANCILLA, Lam., *Syst.* 1801. Sowerby, *Genera of Shells*, No. III.

EBURNA, Lam., *Hist. Nat. des Anim. sans vert.* VII. p. 280.

ANCILLARIA, ejusd. p. 412. Swainson in *Journal of Science*, &c. XVIII. p. 272.

*Testa polita, oblongo-ovata vel oblonga, plerumque subcylindrica; spirâ plerumque brevi, nonnumquam elongatâ, ad suturas oblitâ. Apertura longitudinalis, basi effusâ, nonnumquam emarginatâ; varice calloso, plerumque striato, ad basin columellæ.*

SHELL smooth, shining, oblong-ovate or oblong, generally subcylindrical; spire generally short, sometimes of equal length with the aperture; the sutures covered over with a coat of enamel; aperture longitudinal, base effuse, sometimes more or less emarginated; a more or less thickened or callous varix, which is generally striated, sometimes quite smooth, at the base of the columella.

We do not hesitate to adopt as an improvement the union effected by Swainson\* of Lamarck's *Eburna glabrata* and its congeners to *Ancilla*, or *Ancillaria*; and we adopt also the latter name in order to avoid unnecessary controversy. The number of recent species described by Lamarck is only four under the name *Ancillaria* and one under that of *Eburna*; to these Swainson added ten others, one of which, as he suspected, proves to be only a variety; we now present descriptions and figures of twenty species, so that we have added six species to the number already described: the varieties, of which we have given graphic illustrations, amount to eleven.† The plan of the following *Clavis analytica* is adopted from *Hooker's Muscologia Britannica*; it facilitates a reference to any species which may occur and of which it may be desirable to ascertain the appellation. In order to ascertain the name of a species by this little table, it is necessary in the first place to refer to the first pair of characters presented in it, if the shell be imperforate, it will be referred to the second pair of characters; if it have no tooth on the lower edge of the outer lip it will be referred to No. 3; next, if the spire be very short, to No. 4; then if the upper edge of the volutions be angular, it is *A. Mauritanica*; on the other hand if the upper edge of the volutions be rounded, it is *A. aperta*. By this process any species that is here described will be ascertained with facility. It will, however, be needful to examine afterwards the particular description of the species to ascertain if it agree in all its characters, and save much trouble in referring to the full descriptions of a number of species.

\* However readily we adopt this improvement, we cannot at all coincide with Swainson either in his arguments or conclusions with respect to the other species which have been united to the *E. glabrata* under the generic name *Eburna*. This is, however, a subject upon which we cannot here enter, though we shall be obliged to revert to it hereafter in another place.

† The plan which we have adopted for this extensive publication, viz. a series of monographs, will enable us without inconvenience to add at any future time an appendix to each monograph; we therefore earnestly request the possessors of species not here represented to communicate them to us, in order that when there shall be a sufficient number we may publish them in an appendix.

## SPECIERUM ANCILLARIÆ GENERIS

## CLAVIS ANALYTICA.

1	{ imperforatæ, scu non umbilicatæ 2	
	{ umbilicatæ 18	
2	{ labio externo prope basin edentulo 3	
	{ labio externo prope basin unidentato 5	
3	{ spirâ brevissimâ 4	
	{ spirâ longitudinem aperturæ æquante, vel breviorē 11	
4	{ anfractuum margine superiore angulato . . . . .	1 <i>Mauritiana.</i>
	{ anfractuum margine superiore rotundato . . . . .	2 <i>aperta.</i>
5	{ spirâ brevi 6	
	{ spirâ longitudinem aperturæ æquante vel breviorē 14	
6	{ testâ elongatiusculâ 7	
	{ testâ oblongâ vel ovatâ 8	
7	{ colore candido, vel pallidè cinnamomeo . . . . .	3 <i>candida.</i>
	{ colore aurantiaco-fulvo, dente valido . . . . .	4 <i>effusa.</i>
8	{ varice obliquè striato 9	
	{ varice læviusculo 10	
9	{ varice rufo, vel albicante, anfractibus supernè albifasciatis . . . . .	5 <i>cinnamomea.</i>
	{ varice albicante, superiore anfractûs ultimi sulco basali albido . . . . .	6 <i>albisulcata.</i>
10	{ spirâ acuminatâ . . . . .	7 <i>castanea.</i>
	{ spirâ obtusâ . . . . .	8 <i>obtusa.</i>
11	{ spirâ brevi, aperturæ longitudinem non æquante . . . . .	9 <i>ventricosa.</i>
	{ spirâ longitudinem aperturæ æquante 12	
12	{ balteo solitario . . . . .	10 <i>exigua.</i>
	{ balteis duobus 13	
13	{ varice glaberrimo . . . . .	11 <i>cingulata.</i>
	{ varice striato . . . . .	12 <i>oblonga.</i>
14	{ spirâ carinulatâ . . . . .	13 <i>marginata.</i>
	{ spirâ lævi 15	
15	{ varice obliquo, striato . . . . .	14 <i>australis.</i>
	{ varice rectiusculo 16	
16	{ apice spiræ mucronatâ . . . . .	15 <i>mucronata.</i>
	{ spirâ acuminatâ	
17	{ balteo superiore angusto . . . . .	16 <i>rubiginosa.</i>
	{ balteo superiore latissimo , . . . . .	17 <i>Tankervillii.</i>
18	{ umbilico angustissimo . . . . .	18 <i>balteata.</i>
	{ umbilico distincto 19	
19	{ balteo superiore angustiore . . . . .	19 <i>nivea.</i>
	{ balteo superiore latissimo . . . . .	20 <i>glabrata.</i>



ANCILLARIA MAURITIANA. Fig. 1 and 2.

*A. testâ ovato-oblongâ, ventricosâ, castaneo-fulvâ, marginibus validioribus; spirâ brevissimâ, superioribus anfractuum marginibus obtusè angulatis; ultimo anfractu balteo solitario et sulco lato supra varicem adjecto; baltei margine superiore levato; varice albo, glaberrimo, aperturâ amplissimâ, supernè obtusiusculâ, subtus effusâ; labio externo supernè emarginato, edentulo; long.  $1\frac{6}{10}$ , lat.  $\frac{1}{2}$ , poll.*

*Hab.* in Insulâ Sti. Mauriti.

**DESC.** Shell ovately-oblong, ventricose, bright chesnut colour with darker margins; spire very short with the upper edges of the volutions obtusely angulated; last volution with a single belt, and a wide, but not deep groove above the columellar varix; belt with a raised upper edge; varix white, very smooth; aperture very large, rather obtuse at the upper, wide spreading, and effuse at the lower extremity; outer lip notched at the top, without any tooth on the lower edge.

A few specimens of this new and very beautiful species have been brought to Europe lately from the Mauritius. Captain Marryatt, R. N., has obligingly communicated the species to us: a perfectly white variety has also occurred.

ANCILLARIA APERTA. Fig. 3 and 4.

*A. testâ oblongâ, cylindracco-ventricosâ, aurantiacâ; spirâ brevissimâ, obtusâ; suturâ rotundato-impressâ; ultimo anfractu cingulo basali unico, et sulco supra varicem instructo; varice albo, obliquè striato; aperturâ amplissimâ, pallidâ, supernè obtusâ; labio ad basim edentulo, lævi; long.  $1\frac{5}{10}$ , lat.  $\frac{1}{3}$ , poll.*

*Ancillaria aperta, Sowerby in Tankerville Catalogue, 2288. Appendix, p. 32.*

*Hab.* in Insulis Oceani Pacifici; *Mus. Brit. nost.*

**DESC.** Shell oblong, cylindrical, ventricose, of a dark orange-brown; with a very short, obtuse spire; suture indistinct, indicated by a rounded depression; last volution with a single basal belt, and a groove above the columellar varix, which is white and striated obliquely; aperture very large, of a paler colour, obtuse at the upper part; outer lip quite smooth and even, without any projecting tooth at or near the base.

A beautiful species and apparently very distinct from all those described by Swainson in the 36th number of the Journal of Science, Literature and Arts. It differs from *A. effusa*, the only one with which, on account of its large aperture, it could be confounded, in the following particulars; it is a much less slender shell, it is not banded with white, it has only a slight groove above the varix of the columella; it has only a single belt above the said groove, nor has it any tooth at the base of the outer lip.

ANCILLARIA CANDIDA. Fig. 5 to 7.

*A. testâ oblongâ, clongatâ, candidâ; spirâ brevi, acuminatâ; suturâ oblitâ; anfractu ultimo cingulis duobus basalibus, et sulco supra varicem instructo; varice obliquè striato; aperturâ effusâ, supernè acuminatâ; labio externo ad basim obsoletissimè unidentato; long.  $1\frac{3}{10}$ , lat.  $\frac{1}{10}$ , poll.*

*Ancillaria candida, Lam., Anim. sans vert. VII. p. 414. Swain. in Journ. of Science, Lit. and Arts, XVIII. p. 275.*

*Hab.* in Insularum Indiæ orientalis littoribus, satis frequens; *Mus. plur.*

Var. 1<sup>ma</sup> testâ candidâ, labio externo ad basim obsoletè unidentato, *f. 5, 6. Mus. nost.*

Var. 2<sup>da</sup> testâ pallidè cinnamomeâ, dente basali valido. *f. 7. Mus. nost.*

**DESC.** Shell oblong, elongated, slightly ventricose, yellowish white, sometimes with a bright rusty spot near the acuminate point of the short spire; suture entirely hidden by the polished enamel, last volution having two impressed lines forming the two oblique belts, the upper of these lines is the more strongly marked, and at its inferior termination on the edge of the shell may generally be observed the indication of a small projecting tooth; a rather deep groove is placed immediately above the obliquely striated columellar varix; aperture effuse, acuminated at the superior extremity.

This pretty little shell is commonly received with the Ceylon and Mauritius Boxes; I had it also from Haynam; two varieties have come under my observation, the first is white with a very obsolete tooth near the lower edge of the outer lip; and the other is of a delicate pale cinnamon colour, and has a distinct tooth; it was communicated by Captain Marryatt, R. N.

ANCILLARIA EFFUSA. Fig. 8 and 9.

*A. testá oblongá, semicylindricá, fulvá; spirá subacuminatá, albicante; anfractu ultimo cingulis duobus et sulco supra varicem profundo instructo; varice albicante, concinnè striato, aperturá fulvá, supernè acuminatá, infra effusá; labio externo prope basim unidentato; long.  $1\frac{7}{10}$ , lat.  $\frac{1}{2}\frac{3}{5}$ , poll.*

Ancillaria effusa, Swainson in *Journal of Science, Lit. and Arts*, XVIII, p. 275.

Icon. Chemn. X. t. 147, f. 1381.

*Hab.* in Mari Sinensi, secund. Budgen in Mus. Tank., *Mus. Swainson, Borough, nost.*

**DESC.** Shell oblong, semicylindrical, of a bright orange-brown colour, with a rather acuminate short spire, suture completely hidden by a whitish enamel; last volution with two belts and a deep groove above the columellar varix, which is whitish and closely striated; the varix is rather shorter than in *A. candida* and the aperture rather smaller, of a fulvous colour, acuminate at the superior extremity, wide and effuse below; a single prominent tooth is observable at the extremity of the upper belt near the lower edge of the outer lip.

In general form this beautiful and exceedingly rare species very nearly resembles *Ancillaria candida*. The figure in Chemnitz which I have cited is referred to by Lamarck for his *A. cinnamomea*, from which, however, it differs materially; and it accords perfectly with Swainson's *A. effusa*, except, indeed, that it does not show any tooth near the base of the outer lip; this is, however, accounted for in Chemnitz's description, where, he states that the upper groove terminates in a tooth on the edge of the outer lip near the base; but that it is worn off in most of the specimens.

ANCILLARIA CINNAMOMEA. Fig. 10 to 13.

*A. testá oblongá, ventricoso-cylindraca, castaneo-fulvá, anfractibus supernè albido-fusciatis; anfractu ultimo balteis duobus basalibus, varice columellari rufo, obliquè striato; aperturá supernè acuminatá, subtus effusá; labio externo prope basim unidentato; long. 1, lat.  $\frac{1}{10}$ , poll.*

Ancillaria cinnamomea, Lam., *Anim. sans vert.* VII. p. 413.

Var. 1<sup>ma</sup> testá pallidè aurantiaco-fulvá, varice albido; *A. abifasciata*, Swainson in *Journal of Science, &c.* XVIII. p. 276.

Var. 2<sup>a</sup> testá omnino albicante.

**DESC.** Shell oblong, rather ventricosely cylindrical, of a yellowish-chestnut colour, with a white band at the top of each volution; last volution with two basal belts; columellar varix rufous, thick, oblique and striated; aperture acuminate at the upper part, very slightly emarginated and effuse below; outer lip with a single short tooth near the base.

That the beautiful little shell here described and figured is the *A. cinnamomea* of Lam. I feel quite authorized to assert; although Swainson has described another species under that name. My shell accords perfectly, in every respect, with Lamarck's description. Of the two figures which he has cited, that in *Encycl. Meth.* t. 393. f. 8. a. b. is so bad that it cannot be referred with certainty to any known species; and Chemn. X. t. 147, f. 1381 has a white varix, in which respect it differs from Lamarck's description; it is Swainson's *A. effusa*. A variety of the shell here described, and in which the varix is whitish, must be Swainson's *A. albifasciata*. In my shell there is a little tooth near the base of the outer lip, which is not mentioned in Lamarck; I must here, however, observe that neither does he mention this little tooth in any of his descriptions except in that of *A. Olivula*, although it may be seen in four others,

ANCILLARIA ALBISULCATA. Fig. 14 to 19.

*A. testá ovato-oblongá, subventricosá, castaneá; spirá brevissimá, plerumque mucronatá, nonnunquam obtusissimá, ad basim obscurè albido-fasciatá; anfractu ultimo ad basim balteis duobus instructo, marginè superioris albo: sulco supra varicem inconspicuo; varice albo, obliquo, striato; aperturá supernè acuminatá, subtus effusá; margine labii externi supernè plerumque crassiusculo, infra acuto, unidentato; long.  $1\frac{9}{10}$ , lat.  $\frac{1}{2}\frac{1}{5}$ , poll.*

Syn. *Ancilla marginata?* Sowerby in *Genera of Shells*, fig. 1.

*Ancillaria cinnamomea* Swains. in *Journ. of Sc., Lit. and Arts*, XVIII, 277.

*Hab.* in Oceano Indico: mus. Swainson, Goodall, Broderip, nost.

**DESC.** I have given above the dimensions of the largest specimen I have met with; the proportions sometimes vary a little because the mucronate tip of the spire is occasionally gone. Shell ovately-oblong, rather ventricose, and generally of a light



chestnut, but varying from that colour, through brownish-yellow to nearly white; spire very short, frequently mucronate at the apex, but sometimes quite obtuse, with a lighter coloured band at the lower edge; which is, however, sometimes very indistinct; last whorl having two belts at the lower part; the upper margin of the superior belt is very constantly nearly white; there is an indistinct groove above the varix; the varix is about half the length of the aperture, white, oblique, and striated; superior extremity of the aperture acuminate, lower end effuse; upper margin of the outer lip generally rather thickened, lower edge sharp, with a single mucronate tooth.

This is the *A. cinnamomea* of Swainson, but certainly not of Lamarck, for it neither accords with his description, nor with the figures he cites; it is the same as I had supposed to be *A. marginata* of Lamarck, and I readily acknowledge my mistake, at the same time I must assert that it is not the same as Chemnitz X. t. 147, f. 1381, which I am well assured belongs to Swainson's *A. effusa*.

#### ANCILLARIA CASTANEA. Fig. 20 to 23.

*A. testâ oblongo-ovatâ ventricosâ, castaneâ; spirâ subacuminatâ, apice albo; anfractu ultimo balteis duobus basalibus, et sulco supra varicem instructo, varice columellari albido sulco sinistrâli et striis-obliquis nonnullis; aperturâ supernè subacuminatâ, labio externo dente valido propè basim; long.  $1\frac{4}{10}$ , lat.  $\frac{8}{10}$ , poll.*

Syn. *A. ventricosa*, Swainson Journal of Science, Literature and Arts, XVIII. p. 279. Syn. excl. *cinnamomea*, Journal of Science, Literature and Arts, XVI. t. 5, f. 206.

*Hab.* in littoribus Indiæ Orientalis. Mus. Broderip, nost.

Var. 1<sup>a</sup> testâ omnino colore floris lactei superstratâ. Mus. nost.

*DESC.* Shell oblongo-ovate, ventricose, dark-chestnut coloured; spire rather acuminate with a white tip; last volutions with two basal belts and a groove above the varix; columellar varix whitish, with a groove on the left side and several striæ; aperture rather acuminate at the upper end, outer lip with a prominent mucronate tooth on the outer edge near the base: a variety occurs that is spread over with a beautiful cream-coloured enamel.

This species has been mistaken by Swainson for *A. ventricosa* of Lam., but may be known from it by its having a prominent tooth near the lower edge of the outer lip. The phrase used by Swainson in his character of this species, "*outer lip crenated at the base*," is partly owing to the edge of the lip in the specimen he examined being a little chipped, and partly to a slight irregularity in its growth.

#### ANCILLARIA OBTUSA. Fig. 24, 25.

Swainson in Journ. of Sc. Lit. and Arts, XVIII, 282.

*A testâ ovatâ, apice obtusâ; spirâ breviusculâ, crassâ, obtectâ; ultimo anfractu balteo rufescente albido-marginato, supernè cingulato, infra lineâ impressâ, balteis duobus et sulco supra varicem instructo; varice columellari albo, substriato, sulco notabili sinistrâli impresso; long.  $1\frac{3}{10}$ , lat.  $\frac{1}{2}$ , poll.*

*Hab.* in littoribus capitis bonæ spei. Mus. Broderip, nost.

*DESC.* Shell ovate, blunt at the point, with a rather short, but thick spire, covered by a thick coat of enamel, which spreads over the superior part of the last volution, and forms on it a broad rufous belt with a white margin; lower part of the last volution with an impressed line, it has two belts, of which the upper one is rufous, and a groove above the columellar varix: varix white, obsoletely striated, with a deep groove on the left side. Upper part of the aperture rather obtuse, lower extremity notched; inside white; columellar lip white, thickened, and spreading over the last volution near the upper end of the aperture: beyond which, on the front part of the shell, is a broad rufous patch: the colour of the body-whorl is pale brown, and there is a broadish white spiral band above the suture, which is covered by the rufous band.

A very rare species, of which only three or four bad specimens have been brought from the Cape of Good Hope; the two best of these were in the African Museum, the others in G. Humphrey's collection: none of the specimens are sufficiently complete to shew the tooth at the lower edge of the outer lip, it is, however, probable, from the nature of the groove above the basal varices that when perfect a small tooth may be observed.

## ANCILLARIA VENTRICOSA. Fig. 26 to 32.

Lam. Anim. sans vert. VII, 413.

*A. testá ovatá, ventricosá, apice acuminatá; fulvá, suturá pallidá; basi balteo simplici cinctá; aperturá supernè acuminatá, infrá effusá; labio externo lævi, edentulo; varice columellari brevisculo, obliquo, bistriato.*

Syn. *A. fulva*, Swains. in Journ. of Science, Lit. and Arts, XVIII, 278.

*Hab.* in littoribus Insulæ Indiæ Orientalis Haynam dicta, *G. Humphrey*. Mus. Broderip, Swainson, Goodall, nost.

Var. 1<sup>ma</sup> testá flavâ, suturâ albicante, mus. nost.

Var. 2<sup>da</sup> testá albescente, fasciis fulvis variâ; *A. variegata*, Swains. l. cit. 278. Mus. Broderip, Swainson, Goodall, nost.

DESC. Shell ovate, ventricose, apex of the spire acuminated; of a dark orange-brown, the suture being paler; a single belt, whose upper edge is rather prominent, surrounds the base of the last volution; aperture double the length of the spire, acuminated at the superior extremity, effuse at the lower; edge of the outer lip even, without any tooth; columellar varix rather short, white, oblique, with two striæ, of which the upper is the stronger. Inside paler than the outside.

Of this species two varieties have occurred to me, the first of a beautiful yellow colour, with a nearly white suture; the other of a light colour, with fulvous bands: this last is the *A. variegata* of Swainson, I am, however, convinced by the examination of a number of specimens, that it must only be regarded as a variety of this species, a circumstance at the probability of which Mr. Swainson hints.

The species here described, which is the *A. fulva* of Swainson, accords much better with Lamarck's *A. ventricosa* than the one Swainson has designated by that name: Swainson's *A. ventricosa* is *chestnut-brown*, not *orange-brown*: its spire is more *acuminated*, consequently not *rather obtuse*, its varix is much *more striated* than in this species, and moreover it has a strong projecting tooth near the base of the outer lip, which is not mentioned by Lamarck in his description of *A. ventricosa*. The figure of Martini II. t. 65, f. 731, cited by Lam. for his *A. ventricosa*, is a representation of a young Cowry.

## ANCILLARIA EXIGUA. Fig. 33 to 35.

*A. testá exiguá, oblongá, spirá acuminatá longitudinem aperturæ æquante; ultimo anfractu balteo basali unico, et sulco supra varicem iastructo, varice brevi, oblique striato; plicá solitariâ columellari in superiore aperturæ parte positâ; labio externo edentulo; long.  $\frac{1}{10}$ , lat.  $\frac{2}{10}$ , poll.*

*Hab.* —————. Mus. nost.

DESC. A very small species of an uniform light brown colour; spire acuminated, equal in length to the aperture; last volution with a single basal belt, and a whitish band near the upper edge; a short groove is also observable above the columellar varix, which is short and obliquely striated; the callosity of the columella forms also a single fold near the upper part of the aperture: there is no tooth on the outer lip.

About twenty specimens of this little shell were found among Mr. G. Humphrey's small Olives: at first sight I thought it might prove to be only the young of *A. fulva*, it is, however, very distinct, and may be known by the fold on the columella near the upper end of the aperture.

## ANCILLARIA CINGULATA. Fig. 36, 37.

*A. testá oblongá, pallidá, tenui, suturá distinctá, anfractibus ventricosis, superioribus rufo-fuscis, infra carinulatis, omnibus supernè albo-cingulatis: anfractú ultimo balteis duobus basilariibus lævibus, superiore rufo-fusco; varice columellari tenui, albo, angusto, glaberrimo; long.  $2\frac{2}{10}$ , lat. 1, poll.*

*Hab.* in Oceano Sinensi. Mus. nost.

DESC. Shell oblong, pale brown, thin, suture distinct; volutions ventricose, upper ones reddish brown, with a very small keel at the lower edge, and a rather broad white belt at the upper margin; last volution with two smooth belts at the base, of which the upper one is reddish brown: a depression separates the lower one from the columellar varix, which is narrow, thin, white, and very smooth.

A very remarkable species; of which I have received a single specimen from China; it is a thin and delicate shell: my specimen is imperfect, having lost the apex of the spire, and part of the edge of the outer lip: the reddish brown colour of the upper volutions terminates rather abruptly a little beyond the commencement of the last.

Before this was sent to press, two other specimens have occurred, which shew that the apex of the spire is obtuse and mamillary.



ANCILLARIA OBLONGA. Fig. 38, 39.

*A. testâ oblongâ, pallidè brunneâ, spirâ acuminatâ, apice obtuso, anfractu ultimo fusco-marmorato, supernè balteato, balteo fusco-maculato; infra lineâ impressâ obsoletissimâ, balteis duobus fusco-maculatis et sulco supra varicem instructo; varice albo, obliquè striato; aperturâ supernè acuminatâ, infra emarginatâ; labio externo prope basim obsoletissimè unidentato.*

*Hab.* in Novæ Hollandiæ littoribus. Mus. nost. Gray.

**DESC.** Shell oblong, brownish, with an acuminate spire, whose apex is obtuse; last volution marbled with brown, with a light brown spotted belt at the upper part, lower part with a very obsolete impressed line, and with two brown spotted belts, and a groove above the columellar varix, which is white and obliquely striated; superior extremity of the aperture acuminate, lower extremity notched: outer lip with a scarcely distinguishable tooth near the base.

A few specimens of this very rare species, were found among a large collection received from New Holland by Mr. G. Humphrey, from his son at Port Jackson. In general appearance it somewhat resembles *A. marginata*, but there are no carinations on the spire, and the tooth at the lower part of the outer lip is scarcely perceptible.

ANCILLARIA MARGINATA. Fig. 40 to 43.

*Lamarch, Anim. sans vert. VII., 413.*

*Swains. Journ. of Sc. Lit. and Arts, XVIII., 280.*

*A. testâ ovatâ, ventricosâ, pallidè carneâ, spirâ acuminatâ; anfractibus, infra suturas albido-balteatis, balteo rufo-maculato, supra carinulatis, carinis nonnunquam duabus; aperturâ supernè acuminatâ, subtus coarctatâ, emarginatâ, labio externo prope basim unidentato; anfractû ultimo lineâ impressâ notabili, et balteis duobus basalibus cinctâ; sulco supra varicem distincto; varice columellari breviusculo, lato, oblique sulcato.*

*Hab.* in Novæ Hollandiæ littoribus. Mus. Goodall. Swainson, nost.

Var. 1<sup>ma</sup>. testâ totâ albâ, immaculatâ; Mus. nost.

Var. 2<sup>da</sup>. testâ obscurè carneâ, omnino immaculatâ, balteis inferioribus, varice columellari et aperturâ intus carneis; balteo superiore albo; Mus. nost.

**DESC.** Shell ovate, ventricose, somewhat fusiform, the spire being acuminate, but obtuse at its apex; of a pale dull flesh-colour: immediately below the suture on each volution there is a white belt, spotted with rufous; above the suture one or two small keels are observable on each volution: superior extremity of the aperture acuminate, inferior extremity somewhat contracted, broadly emarginate; outer lip smooth, even, with a single mucronate tooth near the base; last volution surrounded near the lower part with a deeply impressed line, at the termination of which is the mucronate tooth, and at a little distance below it two raised belts, and then a groove immediately above the columellar varix, which is short, broad, and obliquely grooved. The lower part of the last volution is sometimes speckled with rufous.

This species appears to be subject to considerable variation; I possess one specimen that is perfectly white, and rather shorter in proportion to its width; another is of a dull flesh-colour, with the upper belt white, and the lower ones flesh-coloured, and a third is proportionately elongated, and scarcely shows any traces of the little keels on the spire. Specimens of the spotted variety are marked "Port Philips" in G. Humphrey's collection.

ANCILLARIA AUSTRALIS. Fig. 44, 45, 46.

*A. testâ obovatâ, fuscâ, spirâ acuminatâ, albo fuscoque cingulatâ; ultimo anfractu propè basim lineâ impressâ et balteis duobus cinctâ, balteo superiore fusco, inferiore et varicem columellari albicantibus, sulco supra varicem profundo; varice sulcato; aperturâ supernè subacuminatâ, infra emarginatâ; labio externo prope basim obsoletè unidentato; callo prope ætatem spiram obtegente.*

*Hab.* in Novæ Zealandiæ littoribus: Mus. Brit. nost.

**DESC.** Shell obovate, brown, its spire acuminate, with white and brown bands; last volution with an impressed line, which terminates in a small projecting tooth near the lower edge of the outer lip; there are also two belts at the base of the last whorl, the upper of which is brown, the lower white; a deep groove between the belts and the columellar varix, which is white and grooved; aperture rather pointed at the upper extremity, notched at the lower; outer lip near the base with a small tooth; in full-grown specimens the spire is covered thickly with a callous enamel; in which respect it resembles *A. obtusa*, Sw.

A few specimens of this pretty and interesting species were collected by Mr. S. Stutchbury on the coast of New Zealand ; they were taken alive, when the shell was completely covered by the animal. One full-grown specimen was found among the Olives in G. Humphrey's collection.

#### ANCILLARIA MUCRONATA. Fig. 47, 48.

*A. testá oblongá, pallidè brunneá, spirá acuminatá, oblité, apice mucronato, anfractu ultimo supernè balteo albo-marginato, infra lineá impressá dente terminatá, et balteis duobus instructo; varice columellari angusto, substriato, sulco sinistráli inconspicuo; aperturá supernè acutiusculá, infra emarginatá, labio externo prope basim unidentato; labio interno supernè supra spiram extenso; long.  $1\frac{6}{10}$ , lat.  $\frac{7}{10}$ , poll.*

*Hab.* ————. Mus. nost.

**DESC.** Shell oblong, pale brown ; the spire acuminated, coated thickly with enamel ; apex mucronated ; last volution with a white margined belt at the upper part ; an impressed line terminated by a small blunt tooth at the lower edge of the outer lip, and two belts may be observed at the lower part of the last volution ; a very indistinct groove marks the commencement of the columellar varix, which is narrow, whitish, and very faintly striated ; upper end of the aperture rather acute, lower end notched ; outer lip a little thickened at the edge, with a single small tooth near the base ; upper part of the inner lip spreading over the spire.

I have met with a single specimen of this species, which appears, however, to be very distinct from the others. Its locality is unknown.

#### ANCILLARIA RUBIGINOSA. Fig. 49 to 52.

*Swainson, Journ. of Science, Lit. and Arts, XVIII., 283, Zool. Illustr. 2d series.*

*A. testá oblongá, spirá elongato-acuminatá; anfractu ultimo supernè balteo albicante; infra lineá impressá notabili, balteis duobus, superiore duplicato, et sulco supra varicem profundo; varice albicante, substriato, sulco sinistráli conspicuo labio externo prope basim unidentato; callo spiram obtegente; long.  $2\frac{3}{8}$ , lat.  $1\frac{1}{10}$ , poll.*

Testa junior spirá acuminatá, suturis distinctis ; *Hab.* in littoribus Insulæ St<sup>i</sup>. Mauriti. Mus. Gray.

*Hab.* in Mari Sinensi. Mus. Proderip, nost.

Var. 1<sup>ma</sup>. spirá breviusculá, anfractibus infra carinulatis ; Mus. Brod.

**DESC.** Shell oblong, spire elongated and acuminated, but rather variable in the proportion it bears to the aperture. The general colour of the shell is of a chesnut-brown, the spire being of a darker and more rusty colour ; last volution at the upper part with a whitish belt, which is nearly covered by the rusty-coloured callosity that spreads over the spire ; the last volution has a strongly-marked impressed line near the lower part, which forms a short projecting tooth near the lower edge of the outer lip ; there are several species which have such an impressed line, but in this it is more than usually distant from the belts below ; there are two belts below it, of which the upper one is divided nearly in the middle by a raised line ; the groove above the columellar varix is deep, and there is also a deepish groove on the left side of the varix itself, which is whitish, and otherwise but slightly grooved ; the upper part of the aperture is rather rounded ; inside rather paler in colour than the outside ; pillar-lip whitish, with a rose-coloured tint. The above description is taken from the very fine specimen in the collection of Mr. Broderip. In colour the other two specimens cannot be compared with it, although one of them is what is generally termed "a live shell," it is of a pale brown colour. The dwarf variety has a beautiful lilaceous tint spread over the inside of the aperture, the inner lip and part of the spire.

#### ANCILLARIA TANKERVILLII. Fig. 53, 54, 55.

*Swainson in Journ. of Sc. Lit. and Arts. XVIII., 283. Sowerby in Tank. Cat. No. 2285.*

*A. testá ovato-fusiforimi, pallidá, spirá acuminatá, lineá elevatá juxta suturam notatá; anfractu ultimo supernè latissime calloso fasciato infra lineá impressá notabili cincto, balteis duobus et sulco supra varicem instructo; varicè columellari lævi, unisulcato; aperturá supernè subacuminatá, basi emarginatá; labio externo lævi, prope basim unidentato.*

*Hab.* in Insulæ Margaretæ littoribus. Mus. Soc. Geol. nost. et nonnull.

**DESC.** Shell ovately fusiform, of a pale yellowish or dull flesh-colour, with an acuminated spire and an elevated line just



above the suture; upper part of the last volution surrounded by a very broad callous belt, which extends over two-thirds of the volution, and, which is very remarkable, increases in width with the age of the shell; below that is a rather deeply impressed line, which terminates in a mucronate projecting tooth near the lower edge of the outer lip; there are then two belts, the upper of which has its superior edge rather prominent, and a depression in the middle; there is a rather deep groove immediately above the columellar varix, which is smooth, and has also one groove; the superior extremity of the aperture is rather obtuse, the inferior notched; outer lip smooth-edged, with one tooth near the lower part.

Besides the specimen in the Tankerville collection, I have seen only seven others of this very rare shell, with whose locality I am unacquainted; two of these are in the Geological Society's collection, and four in my own; they vary a little in their proportions as well as in their colours. This species approaches in general form and stature to the *Ancillaria glabrata*, it is however easily distinguished, by its not having an umbilicus.

\* A few specimens have lately been dredged up near the Island Margareta, on the coast of Columbia.

### ANCILLARIA BALTEATA. Fig. 56, 57.

Swainson in *Journ. of Science, Lit. and Arts*, XVIII., 284.

*A. testá ovatá, subcylindraceá, spirá conoidé; anfractu ultimo supra latè balteato, balteo supernè incrassato; infra lined impressá nctabili, balteis duobus et sulco profundo supra varicem instructo; sulco in umbilicum supernè decurrente; varice columellari sulco sinistrali obsolete striato; labio externo prope basim unidentato; aperturá supernè coarctatá, infra emarginatá; labio columellari medianè concavo; long.  $1\frac{2}{10}$ , lat.  $\frac{6}{10}$ , poll.*

Syn. Eburna balteata, Sowerby, *Genera of Shells*, No. 19, f. 3 and 4.

Hab. in Sinu Arabico? Mus. Swains. nost.

DESC. Shell ovate, subcylindrical, with a conoidal spire, of a pale yellow or orange colour; last whorl with a broad belt at the upper part, the superior edge of which is thickened and angular; lower part of the last whorl with a strongly-marked impressed line, two belts and a deep groove above the columellar varix, which groove runs into the umbilicus above; columellar varix with a groove on the left side, and obsolete striated; outer lip with a single tooth on the edge near the base; aperture equal to half the length of the shell, contracted at its superior extremity, notched at the base; line formed by the columellar lip concave in the middle. The umbilicus in this species is not nearly so deep as in *A. nivea* of Swainson, or as in *A. glabrata*.

### ANCILLARIA NIVEA. Fig. 58, 59.

Swainson in *Journ. of Sc. Lit. and Arts*, XVIII., 285.

*A. testá oblongá, spirá rotundato-acuminatá, niveá, anfractu ultimo, supra latè balteato, balteo superne incrassato; infra lined impressá notabili, balteis duobus et sulco supra varicem profundo instructo; sulco supra varicem et sulco varicis sinistrali in umbilicum supernè juxta decurrentibus; varice columellari obsolete striato; labio externo prope basim unidentato; aperturá supernè coarctatá, infra emarginatá; labio columellari medianè concavo; long.  $1\frac{1}{2}$ , lat.  $\frac{8}{10}$ , poll.*

Hab. in Oceano Indico. Mus. Swainson, Goodall.

Var. 1<sup>ma</sup>. testá pallidè aurantiacá. Mus. nost.

DESC. Shell oblong, spire rotundato-acuminate; white, or pale yellowish, or light fulvous, with the upper part of the whorls of the spire orange; last whorl with a very broad belt, thickened at its upper edge; lower part of the last whorl with a deeply impressed line, two belts and a deep groove above the varix; this groove, and another on the left side of the columellar varix, unite at the upper end, and run together into the umbilicus; columellar varix obsolete striated; outer lip with a single tooth near the base; aperture half the length of the shell, contracted at the upper part, notched at the lower, the line formed by the columellar lip concave in the middle.

I have rather hesitated to adopt this species, because it so nearly resembles *A. balteata*; the umbilicus is, however, much larger and deeper, and there are other characters by which it may be distinguished; I have thought it better, therefore, to continue it as a distinct species, than to unite it with another from which it differs.

## ANCILLARIA GLABRATA. Fig. 60 to 64.

Swainson in *Journ. of Sc. Lit. and Arts*, XVIII., 285.

*A. testâ oblongâ, aurantiaco-flavidâ, spirâ acuminatâ; anfractibus supernè rotundato-angulatis, infra duabus lineis impressis balteisque duobus instructo; sulco supra varicem et sulco sinistrâli varicis notabili in umbilicum supernè juxta decurrentibus; varice columellari obsoletè striato; labio externo prope basim unidentato; aperturâ supernè obtusâ, coarctatâ, infra emarginatâ; labio columellari medianè concavo; long. 3, lat.  $1\frac{7}{8}$ , poll.*

*Hab.* in Oceano Indico. Mus. Goodall, nost., &c.

Var. 1<sup>ma</sup>. testâ totâ albâ, suturâ distinctâ. Mus. nost.

Var. 2<sup>da</sup>. testâ totâ niveâ, balteis basalibus conjunctis. Mus. nost.

Var. 3<sup>tia</sup>. testâ aurantiacâ, suturis distinctis. Mus. nost.

Syn. Eburna glabrata, *Lam. Anim. sans vert.* VII., 280. *Sowerby, Genera*, No. 19. Eburna, f. 1.

Buccinum glabratum, Linn.

The Butter Whelk, Angl.

L'Ivoire, Gall.

*Hab.* in Oceani Indici, littoribus. Mus. Brit. Goodall, Broderip, &c.

This is the handsomest species of the genus, and at the same time one of the commonest; it is, however, very seldom in perfect condition; having generally lost the lower edge of the outer lip and its tooth. It is of a brilliant orange-yellow colour, darker at the edges and the upper part of the volutions; upper part of the volutions with angles somewhat rounded; with two impressed transverse lines, and two belts above the columellar varix, and another deep groove on the left side of the varix itself, run side by side into the deep umbilicus above. Columellar varix obsoletely striated; outer lip with a single short tooth near the base; aperture obtuse and contracted at the upper end, half the length of the shell, notched at the base; the line formed by the columellar lip is concave or semilunar.

I am disposed to yield my assent to the union of this species, together with *A. balteata* and *A. nivea* (which are Eburnæ of Lamarck) with the Ancillariæ, because I think them sufficiently nearly related, and I am of opinion, moreover, that it is more convenient to unite them with their congeners, forming a division of the genus for them, than to increase unnecessarily the number of genera.



ANCILLARIA.







ANCILLARIA.



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ANCELLARIA.



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## OVULUM.\*

OVULA. Lamarck, *Hist. Nat. des Anim. sans vert.* VII. p. 366.

Sowerby, *Genera of Shells*, No. II.

OVULUS, RADIUS, CALPURNUS, ULTIMUS, Montf.

OVULA, SIMNIA, Leach.

*Testa ovata vel ovato-oblonga, plerumque ventricosa, spirâ occultâ. Apertura longitudinalis, elongata, supra angusta, infra latior; extremitatibus emarginatis et in canales plus minusve productis; labio interno edentulo, externo rarissimè tenui, acuto, plerumque incrassato, involuto, interdum lævi, nonnunquam denticulato seu crenulato.*

WHEN I prepared my account of this genus for the second number of my *Genera of Recent and Fossil Shells*, I had met with but few species, and Lamarck who had paid much attention to the species had only described twelve recent and two fossil. My acquaintance with them is at present much more extended, and I now present my readers with an account of twenty-seven recent species. Having prepared the present account a long time, I was induced to offer it for publication in the *Zoological Journal*, where, I have stated that there is one species described in Lamarck's *Histoire Naturelle des Animaux sans vertèbres*, namely, the *O. hordeaceum*, which I have never yet seen: I have, however, since had an opportunity of examining the identical specimen of this species described by Lamarck, and now publish as good an account of it as can be drawn up from the specimen in its present state.†

The animal of this genus is still unknown to Naturalists; there is, however, strong reason to believe that it is nearly related to that of *Cypræa*, all the species being more or less covered with a shining enamel-like shelly coat, evidently deposited by the bipartite mantle spreading over the two sides of the shell, though seldom extending so far over the back as nearly to meet and form a dorsal line as it frequently does in *Cypræa*. The affinities of *Ovulum* appear to be on one side to *Cypræa*, and on the other to *Bulla*, to which it seems to be connected by the *Bullæ Naucum* and *cylindrica*: this observation must, however, be regarded as suggested by the general similarity in form of the British *Bulla patula*, which I have here united to *Ovulum*.

In their general form the *Ovula* are more or less ovate or oblong; most of the species are rather ventricose, a few are, however, nearly cylindrical: the spire is always hidden, its volutions being horizontal and not descending as they increase, but always preserving the same plane: the aperture is longitudinal, of the whole length of the shell, narrow at its upper part, and more expanded towards the base: both the upper and lower extremities are more or less notched, and

\* *Ovulum*, being a diminutive from *Ovum* which is neuter, our classical friends will acknowledge the propriety of this change in this termination.

† I consider myself compelled to notice a shell of which a description is published in the *Bulletin des Sciences naturelles* as a new species having six brown dots upon its back. Having, at a most disproportionate price become possessed of this shell, I am free to state that the author of that description must have been deceived in it; I can only regard it as a small specimen of *Ovulum Margarita*, upon which some designing person has either burned or painted the six little brown dots!

each produced into a longer or shorter canal: the inner or columellar lip is smooth, without teeth or crenulation; a fold or pliciform tooth is, however, observable in several species both at the upper and lower ends of this lip: the outer lip is very seldom thin and sharp-edged; it is generally thickened and involute, frequently quite smooth, sometimes crenulated or denticulated. In their young state the outer lip is thin and sharp-edged, and the outside is not covered with the shining enamel-like shelly coat.

Since the publication of Lamarck's *Hist. Nat des Anim. sans vert.* (when only two were known), there have been considerable additions to the number of fossil species, several small species having occurred in the Crag, in the Calcaire Grossier and in the contemporaneous formations, near Bordeaux, in Touraine, at Piacenza, and in Britain;\* I believe the fossil *Ovula* have not occurred in any bed below the London clay.

I had prepared the above observations on the genus *Ovulum*, when I was favoured by the Rev. Dr. Goodall with the following extract from the Zoological part of the *Voyage de Freycinet*, by M. M. Quoy et Gaimard, which proves the correctness of my suggestion relative to the animal of *Ovulum*. I am not, however, induced to degrade it from the rank of a genus, because I think there are sufficient distinguishing characters.

“ L’animal de l’Ovule a la plus grande ressemblance avec celui de la Cyprée, comme  
 “ pouvoit le faire pressentir le grand rapprochement des coquilles. Sa forme générale est tout  
 “ à fait la même; son manteau est double; les cirres de la bande marginale, pédiculés et renflés  
 “ en champignon à l’extrémité, sont moins nombreux et ont une autre forme que ceux des  
 “ Cyprées. En avant et en arrière les deux lobes du manteau se continuent sous forme de canal,  
 “ plus marqué en avant, où il présente un rudiment de tube. Le pied est celui d’une Cyprée,  
 “ c’est à dire, fort grand, ovale, à bords minces, l’antérieur traversé par un sillon marginal. Il  
 “ presentoit vers le milieu de cette extrémité une sorte de ventouse assez profonde, à bords assez  
 “ réguliers; mais n’ayant vu qu’un individu d’Ovule, nous n’osons conclure que ce soit une dis-  
 “ position normale. Même identité pour la tête et la trompe qui paroît pouvoir se dilater en  
 “ trompette; les yeux sont seulement un peu plus petits. Il existe un rudiment de dent labiale  
 “ supérieure, fort étroite, en fer à cheval et collée à la peau de manière à n’avoir pas une grande  
 “ action. La masse linguale, épaisse, ovale, en partie libre dans la cavité buccale, est armée  
 “ de petits crochets comme à l’ordinaire. L’anus est à l’extrémité d’un petit tube flottant dirigé  
 “ en arrière dans la cavité branchiale; celui-ci est immense et contient deux branchies, dont  
 “ l’une fort grande, en fer à cheval, enferme la plus petite dans son ouverture, qui est dirigée en  
 “ avant. L’oviduc, terminé par un tube libre flottant dans la cavité branchiale, est dirigé  
 “ d’avant en arrière. Ainsi, la considération de l’animal de l’Ovule exige presque la réunion  
 “ de ce genre avec celui des Cyprées.” p.p. 444, 445.

The following table must be considered as entirely artificial, it is prepared with a view to assist in the ascertaining the names of species, not as an attempt at a natural arrangement of the genus.

\* A large fossil shell having the form of *Cypræa Mus*, has been discovered in Holland, and referred to this genus by M. Duclos, under the specific name of *O. tuberculosa*; this shell is, however, more properly arranged with the *Cyprææ*.



SPECIERUM OVULI GENERIS  
CLAVIS ANALYTICA.

1	{	marginē labii externi incrassato 2	
		marginē labii externi tenui, acuto vel subacuto 25	
2	{	marginē labii externi internè crenulato vel denticulato 3	
		marginē labii externi internè lævi 16	
3	{	dorso rotundato 4	
		dorso obtusè angulato 11	
4	{	canalis inferioris marginē sinistrali rectiusculo 5	
		canalis inferioris marginē sinistrali distinctè uniplicato 9	
5	{	canali impresso inter labium sinistrale canalis superioris et corpus testæ . . . . . 1 <i>Ovum.</i>	
		columellâ supernè uniplicatâ 6	
6	{	plicâ superiore columellari validâ, acutiusculâ 7	
		plicâ superiore obtusâ, testâ subglobosâ . . . . . 2 <i>Margarita.</i>	
7	{	testâ elongato-ovatâ . . . . . 3 <i>Adriaticum.</i>	
		testâ pyriformi 8	
8	{	canali inferiore subreflexo . . . . . 4 <i>pyriforme.</i>	
		testâ colore carneo-rubescente . . . . . 5 <i>carneum.</i>	
9	{	testâ pyriformi . . . . . 6 <i>marginatum.</i>	
		testâ ovatâ 10	
10	{	labii externi marginē lato, dorso nonnunquam subangulato . . . . . 7 <i>lacteum.</i>	
		marginē labii externi angustiore, depresso . . . . . 8 <i>breve.</i>	
11	{	extremitatibus dorsi verrucosis . . . . . 9 <i>verrucosum.</i>	
		extremitatibus appendiculo nullo 12	
12	{	testâ ovali, intus roseâ . . . . . 10 <i>angulosum.</i>	
		testâ oblongo-ovali 13	
13	{	testâ subcylindricâ, extremitatibus subacutis . . . . . 11 <i>triticeum.</i>	
		testâ fusiformi, extremitatibus acuminatis 14	
14	{	testâ albidâ, dorso transversè striato, vel extremitatibus striatis 15	
		testâ rubescente, dorso albido-cingulato . . . . . 12 <i>Frumentum.</i>	
15	{	testâ albâ, dorso transversè striato . . . . . 13 <i>striatulum.</i>	
		testâ supernè emarginato . . . . . 14 <i>emarginatum.</i>	
16	{	extremitatibus obtusis 17	
		extremitatibus plus minusve acuminatis seu rostratis 19	
17	{	dorso obtusè angulato . . . . . 15 <i>gibbosum.</i>	
		dorso rotundato 18	
18	{	testâ ovatâ, albâ . . . . . 16 <i>obtusum.</i>	
		testâ oblongâ rubescente . . . . . 17 <i>Seminulum.</i>	
19	{	plicâ superiore collumellari obliquâ 20	
		plicâ indistinctâ vel nullâ 23	
20	{	testâ subcylindricâ 21	
		testâ ovato-fusififormi 22	

21	{	testâ minimâ, apice superiore subacuto . . . . .	18 <i>Formicarium</i> .
	{	apice superiore mucronato . . . . .	19 <i>Secale</i> .
22	{	labio externo infrâ subangulato . . . . .	20 <i>Spelta</i> .
	{	dorso obtusè angulato . . . . .	21 <i>intermedium</i> .
23	{	rostris breviusculis . . . . .	22 <i>birostre</i> .
	{	rostris longioribus 24	
24	{	testæ corpore fusiformi . . . . .	23 <i>longirostratum</i> .
	{	testæ corpore ovato . . . . .	24 <i>Volva</i> .
25	{	testâ cylindricâ, margine subacuto . . . . .	25 <i>aciculare</i> .
	{	testâ ventricosâ, margine acuto . . . . .	26 <i>patulum</i> .
		Species incertæ sedis . . . . .	27 <i>hordeaceum</i> .

#### OVULUM OVUM. Fig. 1 to 5.

*O. testâ ovato-inflatâ, medio ventricosâ, politâ, lacted; extremitatibus prominulis, subtruncatis; fauce aurantiaco-brunneâ: long.  $3\frac{3}{10}$ , lat.  $2\frac{4}{10}$  poll.*

Ovula Oviformis, *Lam. Anim. sans vert VII.*, 366. Bulla Ovum nonnull.

Var. testâ pygmæâ, incrassatâ, dorso utrinque sulco terminali cicatricoso instructo; long. exempl. minor.  $1\frac{3}{10}$ , lat.  $\frac{3}{10}$  poll. exempl. majusc.  $2\frac{3}{10}$ , lat.  $1\frac{3}{10}$  poll.

*Hab.* in Oceano Indico.

**DESC.** The largest and handsomest species of the genus. Shell brilliantly polished, milk-white, egg-shaped, both extremities prominent, slightly truncated; outer lip much thickened, irregularly crenulated on its inner edge; inside of a rich orange brown; a fold of the inner lip forms a regular canal at the upper as well as lower extremity. The very young shell is slightly transversely striated, its surface is duller, its outer lip is sharp-edged and not inflected; as it increases, the outer lip becomes thickened and turned inwards; and the shell attains its brilliant polish: the colour of the inside also strengthens with age; the very young shell being colourless. A dwarf variety occurs which is less than an inch and an half long, and which has an irregular cicatrix at the back of each produced end.

#### OVULUM MARGARITA. Fig. 19 and 20.

*O. testâ ovali-subglobosâ, supernè obtusâ, infrâ subacuminatâ, albâ; columellâ intus propè basin depresso-concavâ; labii externi margine rotundato, intus denticulato; long.  $\frac{11}{10}$ , lat.  $\frac{4}{10}$  poll.*

*Licium Margarita, G. Humphrey, MS. ined.*

*Hab.* in Insulis quas "Friendly" vocamus, in Mari Pacifico.

**DESC.** Shell oval, nearly globular; obtuse at the upper end, and slightly acuminate at the lower; perfectly white; lower part of the columella depresso-concave within; edge of the outer lip rounded, denticulated within; canals very short, the upper one turned to the left.

Received from the Friendly Islands by Mr. G. Humphrey; all the specimens in his possession, one only excepted, were pierced and strung by the natives.

#### OVULUM ADRIATICUM. Fig. 23 and 24.

*O. testâ oblongo-ovali, subventricosâ, utrinque subacuminatâ, pallidè carned, hyalinâ; labii externi margine angusto, intus denticulato; columellâ supernè uniplicatâ, infrâ subdepressâ, intus marginatâ; long.  $\frac{9}{10}$ , lat.  $\frac{5}{10}$ , poll.*

*Hab.* in mari Adriatico; (communicavit Dr. Goodall,) et in Mari Siculo.

**DESC.** Shell oblong-oval, rather ventricose; somewhat acuminate at both extremities, pale flesh-colour, hyaline; margin of the outer lip narrow, denticulated on the inside: upper end of the collumella with one oblique plait; lower end somewhat flattened, with a thickened internal margin.

I found one specimen of this in G. Humphrey's collection; another was given to me by the Rev. Dr. Goodall, who brought several from the Adriatic. It has since been found abundantly on the coast of Sicily.



## OVULUM PYRIFORME. Fig. 21, 22 and 25.

*O. testá pyriformi, albicante; canali inferiori subreflexo; dorso ventricoso; columellá ad basin excavato-depressá, superne dente pliciformi valido; labio externo internè plicato-denticulato, infrá subdepresso; long.  $\frac{1}{2}$ , lat.  $\frac{1}{3}$ , poll.*

*Hab.* ad littora Novæ Cambriæ Meridionalis. Mus. nost.

**DESC.** Shell pear-shaped, whitish, with a pale flesh-coloured tinge; back ventricose, transversely striated; lower canal straightish, slightly reflected; columella with an excavated depression within, near the base, and a strong pliciform tooth at the upper end; outer lip sloping from the edge inwards, inner edge plicato-denticulated, rather depressed at the lower part.

Of this elegantly formed and rare species a few specimens were received from New South Wales, by Mr. G. Humphrey.

## OVULUM CARNEUM. Fig. 17 and 18.

*O. testá ovali, carneo-rubente; dorso gibboso, transversim tenuiter striato; extremitatibus, præsertim inferiore, acuminatiusculis; labio externo intùs denticulato; columellá superne obliquè uniplicatá; long.  $\frac{1}{3}$ , lat.  $\frac{1}{4}$ .*

*Ovula carnea, Lam. Anim. sans vert. VII. 368. Bulla carnea nonnull.*

*Hab.* in Mari Siculo. Mus. Goodall, nostr., &c.

**DESC.** Shell ovate, back gibbous, transversely slightly striated; extremities, particularly the lower, slightly acuminated; outer lip arched, toothed on the inside; upper end of the columella forming a small thickish fold.

A pretty little species of a reddish flesh-colour, from the Coral Fishery on the coast of Barbary, and also from the coast of Sicily.

## OVULUM MARGINATUM. Fig. 15 and 16.

*O. testá oblongo-ovali, ventricosá, utrinquè obtusiusculá, albá; labii externi margine rotundato, intùs denticulato, propè basin depresso, plicato-denticulato: columellá superne dente pliciformi valido, propè basin depressá, infrá uniplicatá: marginibus externis labiorum aurantiaco-marginatis; long.  $\frac{1}{2}$ , lat.  $\frac{1}{3}$ , poll.*

*Hab.* —————. Mus. nostr.

**DESC.** Shell of a rather oblong oval form, and obtuse at both extremities, white, particularly the front: the back with a number of slightly-raised transverse lines; border of the outer lip rounded, denticulated on the inner edge, depressed and plicato-denticulated near the lower end; upper part of the columella with a strong pliciform tooth; near the base it is depressed, and below it has a prominent fold or tooth: outer borders of the lips with an orange margin.

An interesting species, much resembling *O. pyriforme* in general appearance; by attention to its peculiarities noticed in the description, it will be easy to recognize it. A single specimen was found in Mr. G. Humphrey's collection, without locality.

## OVULUM LACTEUM. Fig. 13 and 14.

*Lam., Anim. sans vert. VII., 368.*

*O. testá ovatá, subgibbosá, lævi, candidá; labii externi margine interno plicato-denticulato; columellá ad basin compréssá; long.  $\frac{1}{2}$ , lat.  $\frac{1}{3}$ , poll.*

*Hab.* ad littora Insularum Oceani Pacifici. Mus. Goodall, Mawe, nost.

**DESC.** Shell ovate, slightly gibbose, smooth, white, back with a few slight transverse angular lines; edges thickened; inner edge of the outer lip denticulated, the teeth somewhat extended outwards in the form of short plicæ; inner edge of the columella rather compressed, particularly near the base; canals very short, that at the base produced by a pliciform tooth at the base of the columella.

Rather a rare species, which has occasionally been brought from the Islands of the South Seas, as well as from Haynam and Timor. It seldom reaches the size of our specimen, but its proportions are not subject to variation.

## OVULUM BREVE. Fig. 26 and 27.

*O. testá ovali, utrinquè obtusá, brevi, albá; labii externi margine intùs denticulatá; columellá superne uniplicatá, extùs marginatá, propè basin depressá, infrá uniplicatá; canalibus brevissimis; long.  $\frac{1}{2}$ , lat.  $\frac{1}{4}$ , poll.*

*Hab.* —————. Mus. nost.

**DESC.** Shell nearly oval, rather short, obtuse at both ends, white; inner margin of the outer lip toothed; columellar lip

forming a strong flexuous pliciform tooth at the upper end, thickened on the outer edge, depressed near the base, and forming a tooth-like fold at the lowest end: both the canals very short. The outer lip of the only specimen I have seen is rather sharp, and a few of the teeth extend from the inner to the outer edge, near the centre of the lip. I am not acquainted with its locality.

### OVULUM VERRUCOSUM. Fig. 10 to 12.

*O. testá ovatá, gibbosá, albá; dorso transversim angulato; verrucá depressá ad utramque extremitatem adjectá; long.  $1\frac{3}{10}$ , lat.  $\frac{8}{10}$ , poll.*

Ovula verrucosa, *Lam., Anim. sans vert.* VII., 367. *Bulla verrucosa, nonnull.*

Testa junior marginem labii externè internè edentulum exhibet.

*Hab.* in Oceano Indico.

**DESC.** Shell ovate, gibbose, white, pale lilac at the extremities; the back raised into an obtuse transverse angle; outer lip when full grown much thickened, toothed on its inner edge; the glaze spread over the outer part of the shell at its maturity does not meet in the middle of the back, the intermediate space is faintly transversely striated: two singular small flattened, white, brown-edged, wart-shaped excrescences, one placed at each extremity of the back, distinguish this species from all others.

Not an uncommon species in the Indian Ocean, the Ceylon and Isle of France boxes generally containing several specimens. It is, however, rendered interesting, as being the only shell with the singular tubercular appendages noticed in its character and description. To these it is indebted for its name, and on account of them Montfort distinguished it from *Ovulum* as a genus under the name of *Calpurnus*.

### OVULUM ANGULOSUM. Fig. 6 to 9.

*O. testá ovato-ventricosá, albá; dorsi medio transversim obtusè angulato, lineis subprominulis cincto; intùs roseo-violaceá; long. 2, lat.  $1\frac{4}{10}$ , poll.*

Ovula angulosa, *Lam., Anim. sans vert.* VII., 367. *Bulla imperialis. Dillw.*

Ovula costellata. *Lam., Ann. du Mus.* XVI., 110.

*Hab.* "Friendly Islands." *G. Humphrey.*

**DESC.** Shell ovate, ventricose, milk-white; the middle of the back transversely obtusely angular, with a few raised lines; the upper extremity is not produced into a regular canal as in *O. Ovum*, but the lower canal is rather lengthened and truncated; outer lip much thickened, crenulated on its inner edge: inside of a delicate rose-colour.

I possess a dwarf variety of this beautiful species, which is of a dirty brownish white on the back. It is observable that Lamarck has very arbitrarily, and without giving any reason, changed the specific name from *costellata* to *angulosa*; I cannot help regretting this circumstance; at the same time I adopt the latter name as being the more expressive.\* He states that this species is always smaller than *O. Ovum*, I have, however, some specimens of the latter that are fully grown, and yet smaller than the smallest I have seen of *O. angulosum*. This is a very rare species, and deservedly esteemed by collectors.

\* For the sake of avoiding an useless synonymy, it would have been desirable to have retained Dillwyn's specific name of *imperialis*. Lamarck has, however, in this instance, as in many others, been guilty of a great oversight, in describing as new a shell that had been described long before.

### OVULUM TRITICEUM. Fig. 35.

*Lam., Anim. sans vert.* VII., 368.

*O. testá ovato-oblongá, lævi, rubro-aurantiacá; labio externo albicante, intùs minutissimè denticulato; columellá supernè dente albida, valido, subtùs compressá; long.  $\frac{1}{2}$ , lat.  $\frac{7}{10}$ , poll.*

*Hab.* —————. *Mus. nost.*

**DESC.** Shell ovato-oblong, smooth, orange-red; outer lip whitish, rather straight edged, slender, sloping from the outer to the inner edge, which is very minutely denticulated; there is a tubercular fold or strong whitish tooth at the upper end of the columella, the base of which is depressed and straightened: aperture narrow at the upper extremity, wider and somewhat angular at the lower. In general form this species is more lengthened than *O. carneum*, and it is less gibbous; it has, however, a slight angular gibbosity rather above the middle of the back. My specimens accord perfectly with Lamarck's description; he states that it is found on the coast of Africa; my specimens, according to the late G. Humphrey, are from Japan.



## OVULUM FRUMENTUM. Fig. 37.

*O. testá oblongá, dorso transversim gibboso; rubescente, transversim albido-unifasciatá; labio externo margine planulato, intùs denticulato; labio columellari supernè calloso, infrá depresso; extremitatibus subacuminatis, obtusiusculis; long.  $\frac{1}{10}$ , lat.  $\frac{3}{10}$ , poll.*

*Hab.* —————. Mus. nost.

**DESC.** Shell oblong, back transversely gibbous; colour approaching to crimson, with a whitish transverse band; edge of the outer lip flattened, inner edge denticulated: columellar lip with an oblique callosity at the upper end, depressed at the lower part; extremities rather acuminate and obtuse.

One of the smallest species I know; I have only seen two or three specimens, and am unacquainted with its locality.

## OVULUM STRIATULUM. Fig. 38.

*O. testá oblongá, dorso transversim striato et gibboso, albicante; labio externo planulato, intùs denticulato; labio columellari supernè calloso, infrá depresso; extremitatibus subacuminatis, obtusiusculus, long.  $\frac{1}{10}$ , lat.  $\frac{3}{10}$ , poll.*

*Hab.* ad littora Oceani Indici. Mus. nost.

**DESC.** Shell oblong, back transversely striated and gibbous, whitish; outer lip flattened on the edge, denticulated on the inside; columellar lip callous at the upper end, depressed at the lower; extremities rather acuminate, but obtuse.

A very small East Indian species, much resembling *O. Frumentum* in general shape and characters, and differing from it only in colour and in being transversely striated. From the East Indies, according to Mr. G. Humphrey.

## OVULUM EMARGINATUM. Fig. 54 and 55.

*O. testá oblongá, subventricosá, medio transversim carinatá, cariná obtusá; aperturá sublineari, supra emarginatá, emarginatione validá; labio externo internè leviter denticulato.*

*Hab.* —————.

**DESC.** In general form this species closely resembles *O. gibbosum*, but it may easily be distinguished by its superior canal forming a distinct notch, visible from the back: the thickened outer lip is white, but the remainder of the shell is of a pale rose-colour. The only specimen of this rare species I have seen is in Mr. Bland's collection; its locality is unknown.

## OVULUM GIBBOSUM. Fig. 28 to 31.

*O. testá oblongá, utrinque obtusá, albidá seu aurantiaco-fulvá; angulo elevato obtuso suprâ medium cingulato; long.  $1\frac{3}{10}$ , lat.  $\frac{1}{2}$ , poll.*

*Ovula gibbosa, Lam., Anim. sans vert. VII., 369. Bulla gibbosa, nonnull. Ultim. Montf.*

Testa junior labii externi margine acuto, dorso obsolete angulato.

Var. 1<sup>ma</sup>. canali superiore angustiore; long.  $1\frac{3}{10}$ , lat.  $\frac{6}{10}$ , poll.

Var. 2<sup>da</sup>. testá brevior, latior; long.  $1\frac{1}{10}$ , lat.  $\frac{1}{2}$ , poll.

*Hab.* ad littora Brasilæ, insularumque Indiæ Occidentalis.

**DESC.** Shell of an oblong form, obtuse at both extremities, upper extremity of the aperture rather narrower than the lower; canal at both ends nearly straight; lips a good deal thickened, inner edge of the outer lip a little irregular, not toothed: the glaze deposited by the two coats of the mantle not meeting in the centre of the back, the intermediate space longitudinally striated, generally of a lighter colour than the edges, which are mostly of a dull orange-yellow, darker on the dorsal than on the ventral side. In its young state this species scarcely shows any of the angular dorsal gibbosity which so eminently characterizes it when full grown. There are two varieties, one of which is shorter and broader, the other narrower at the upper extremity, and rather paler in colour and slenderer in form than the principal variety.

A common species from the coast of Brazil and the West India Islands.

## OVULUM OBTUSUM. Fig. 34.

*O. testá ovatá, utrinquè subacuminatá, obtusá, lævi, albicante; aperturá propè basin subeffusá; labium marginibus lævibus; long.  $\frac{4}{10}$ , lat.  $\frac{5}{20}$ , poll.*

*Hab.* ———. Mus. nost.

DESC. Shell ovate, slightly acuminated towards both extremities, but obtuse; smooth all over, whitish; upper end of the aperture narrow, linear; lower end wider and rather effuse; edges of both lips quite smooth; middle of the outer lip thicker than the two extremities.

Several specimens of this very small species were among Mr. G. Humphrey's stores, but without any information concerning its locality. It is certainly nearly related to *O. Spelta*, but I think sufficiently distinct to be easily recognised.

## OVULUM SEMINULUM. Fig. 40.

*O. testá oblongá, medio ventricosiusculá, carneo-rubescente; extremitatibus obtusis; labii externi margine rotundato, edentulo: labio columellari depresso: long.  $\frac{5}{20}$ , lat.  $\frac{2}{20}$ , poll.*

*Hab.* in Insulis Maris Pacifici. *G. Humphrey.*

DESC. Shell oblong, slightly ventricose in the middle, flesh-red; extremities obtuse; margin of the outer lip rounded, without teeth; columellar lip depressed, its inner edge sharp-angled.

One of the smallest species I have seen: a single specimen was preserved in Mr. G. Humphrey's collection labelled "Semi-Cowry, Friendly Islands."

## OVULUM FORMICARIUM. Fig. 39.

*O. testá oblongá, dorso supra medium transversim subcarinato, albo; labio externo edentulo, margine subdepresso; long.  $\frac{5}{20}$ , lat.  $\frac{1}{10}$ , poll.*

*Hab.* in Oceano Indico. *G. Humphrey.* Mus. nost.

DESC. Shell white, oblong; back slightly carinated rather above the middle, outer lip without teeth, its margin rather flattened.

The smallest species I have seen. From its resemblance to an ant's egg I have named it *O. formicarium*.

## OVULUM SECALE. Fig. 36.

*O. testá oblongá, angustá, albicante, supernè obtusè mucronatá; columellá supernè uniplicatá, subtus depresso-sulcatá; labii externi margine rectiusculo, propè basin subangulato; long.  $\frac{7}{10}$ , lat.  $\frac{5}{20}$ , poll.*

DESC. Shell oblong, narrow, whitish; upper end of the lip obtusely mucronated; columella with a single fold at the upper end; lower part, commencing near the middle, depressed, with a slight groove; margin of the outer lip thickened, nearly straight, somewhat angular near the lower part.

The only specimens of this species I have seen were in Mr. G. Humphrey's collection, I am unacquainted with their locality.

## OVULUM SPELTA. Fig. 43.

*O. testá oblongá, medio subventricosá, utrinque acuminatá; aperturá supernè lineari, subtus subeffusá; labio externo subtus rotundato-angulato; columellá supernè obliquè uniplicatá; long.  $\frac{7}{10}$ , lat.  $\frac{3}{10}$ , poll.*

*Ovula Spelta, Lam., Anim, sans vert. VII., 370. Bulla Spelta, nonnull.*

*Hab.* ad littora Insularum Oceani Pacifici. *G. Humphrey.* Mus. nost., &c.

DESC. Shell oblong, slightly ventricose, pointed at both extremities, rather more at the upper than at the lower; aperture linear and narrow at the upper, and rather effuse at the lower extremity; lower end of the outer lip rather angular, angle rounded, columella with an oblique plait at the upper end.

There is no doubt of the shell here given being the *Ovula Spelta* of Lamarck, and I believe also the *Bulla Spelta*, Linn.

It is related to *O. birostre*, and comes between that species and my *O. obtusum*. Lamarck states it to be a Mediterranean species; my specimens are from the South Seas and Friendly Islands, according to two tickets in the hand writing of Mr. G. Humphrey.

Martini's (tom. I. f. 215.) and Gualtieri's (t. 15, f. 4.) figures are not sufficiently good to be referred to as certainly belonging to this species.



## OVULUM INTERMEDIUM. Fig. 32 and 33.

*O. testá ovato-oblongá, utrinquè subacuminatá; dorso suprà medium transversim subangulato; labio columellari propè extremitatem superiorem obliquè uniplicato: labii externi margine interno edentulo: long.  $1\frac{5}{10}$ , lat.  $\frac{1}{2}$ , poll.*

*Hab.* —————. Mus. Mawe, nost.

*DESC.* Shell ovate-oblong, somewhat acuminate at both ends, rather more so at the upper than the lower; back with a transverse raised rounded angle rather above the middle; aperture narrow at the upper end, broader at the lower; columellar lip with a single oblique plait close to the upper end: outer lip thickened, its inner edge smooth, without teeth: colour pale fulvous.

I have named this *intermedium* from the circumstance of the principal characters of two other species, namely the *O. gibbosum* and *O. birostre* being combined in it. I have seen only two specimens of this, one of which is in Mrs. Mawe's, the other in my own Collection.

## OVULUM BIROSTRE. Fig. 41, 42, 44 and 45.

*O. testá oblongá, ad utramque extremitatem rostratá, medio subventricosá, levissimá, albicante; aperturá supernè angustá, lineari, infrà subeffusá; labio externo subtùs rotundato-angulato; columellá supernè obliquè uniplicatá; long.  $1\frac{5}{10}$ , lat.  $\frac{1}{10}$ , poll.*

Ovula birostris, *Lam., Anim. sans vert.* VII. 370. Bulla birostris, *nonnull.*

*Hab.* ad littora Insularum Oceani Pacifici. Mus. nost., &c.

*DESC.* Shell oblong, slightly ventricose in the middle, long-pointed at both extremities, very smooth, light coloured; upper end of the aperture narrow, linear; lower end rather effuse; lower part of the outer lip somewhat angular, angle rounded; a single oblique fold at the upper end of the columella: outer lip more thickened in the middle than at the extremities.

Rather larger than *Ovulum Spelta*, from which it differs principally in having both extremities produced in a lengthened point; how far this character may be regarded as constituting a sufficient specific distinction, it is difficult to decide, particularly as there are specimens of intermediate character. I have thought it desirable to consider the short beaked specimens as a variety of the present. Collections in general contain\* so few specimens of this interesting genus, that I am obliged almost exclusively to form all my conclusions from the study of my own.

\* Very few collections contain more than seven or eight species, and Lamarck describes only twelve, whereas I possess about twenty-three, and have here described twenty-seven.

## OVULUM LONGIROSTRATUM. Fig. 46 to 48.

*O. testá oblongá, tenui, albicante, utrinquè longirostratá; dorso sub-gibboso; aperturá angustá, propè basin paululum expansá; labii externi margine exteriorè subincrassato; long.  $2\frac{5}{10}$ , lat.  $\frac{1}{10}$ , poll.*

*Hab.* in Mari Adriatico. Mus. Goodall.

*DESC.* Shell oblong, slender, whitish, with a slight flesh-coloured tint; the back is rather tumid, and both the terminal canals are very much elongated and sharply acuminate, like the long beak of some small birds; aperture narrow, slightly widened near the base; outer lip with its outer margin rather thickened; inner margin smooth.

A most interesting, delicate and slender species, of which I have only seen one specimen, brought from the Adriatic by the Rev. Dr. Goodall.

## OVULUM VOLVA. Fig. 56 and 57.

*O. testá ovali, utrinquè longirostratá, dorso transversè striato; labio externo incrassato, margine rotundato, intùs crenulato; canalibus subflexuosis, elongatis; long. 4, lat. 1, poll.*

Ovula Volva, *Lam., Anim. sans vert.* VII., 370. Bulla Volva, *Linn. et nonnull.*

*Hab.* in Oceano Sinensi, Javanico, &c.

*DESC.* Body of the shell oval; back transversely striated; outer lip considerably thickened, not so perfectly involute as in some other species, its edge rounded, slightly and irregularly crenated within; both the canals much prolonged, and somewhat flexuous, the upper longer than the lower. The outside of the body of this shell, when in good condition, is covered with transverse impressed striæ, these diverge as they approach the lip and become oblique towards the canals on which they gradually increase so much in breadth as rather to form the spaces between oblique raised lines than to deserve the appellation of impressed striæ.

Not only singular but elegant in form; when in fine condition it is of a delicate flesh-colour, darker within, and the outside

of the outer lip of a beautiful pink hue: its long canals are spirally rolled, and obliquely striated on the back; the reflected lips do not spread far over the back of the shell. Lamarck mentions the Coast of Brazil and the West Indies, but I am rather inclined to believe that China, Sumatra, Java and the Islands of the Indian Archipelago may with more propriety claim this interesting and generally valued shell as a native of their coasts. It is the Weaver's Shuttle of English Collectors, *La Navette* of the French.

#### OVULUM ACICULARE. Fig. 49 to 52.

*Lam., Anim. sans vert.* VII. 369.

*O. testâ oblongâ, angustâ, cinereo-violascescente; labio externo columellâque rectis; canali superiore extûs carinam obtusam efformante; labio externo vix incrassato, propè basin subangulato; columellâ infrâ medium subsulcatâ; long.  $\frac{2}{10}$ , lat.  $\frac{1}{10}$ , poll.*

*Hab.* ad littora Insularum Indiæ occidentalis. Mus. Goodall, nost., &c.

Var. 1 testâ albicante, vel flavicante, lineâ columellari violaceâ.

Var. 2 testâ violaceâ, ventricosiusculâ.

Var. 3 testâ flavicante, ventricosiusculâ.

**DESC.** Shell oblong, narrow, dull violaceous; columella and outer lip straight; upper canal forming an obtuse keel on the outside; outer lip scarcely thickened, slightly angular near the base; columella with a slight longitudinal groove near and rather below the middle.

We have several varieties of this species, both in colour and form: the first is white, with a violet line along the middle of the columella; another is of a sulphur colour with a similar violet line; a third is rather more ventricose, and of a violet colour, and the fourth of a greenish yellow, and of the same form. It is a native of the West Indies.

#### OVULUM PATULUM. Fig. 58.

*O. testâ tenui, ovato-oblongâ, medio subventricosâ, supernè coarctatâ; aperturâ latiusculâ; labii externi margine arcuato, acuto; columellâ supernè uniplicatâ; prope basin longitudinaliter sulcato-impressâ; long. 1, lat.  $\frac{5}{10}$ , poll.*

*Syn.* Bulla patula. *Auctorum Britannicorum.* Simnia patula, *Leach.*

*Hab.* in Mari Britannico. Mus. nonnull.

**DESC.** Shell thin, ovate-oblong, ventricose in the middle and contracted at the upper extremity; aperture rather wide, margin of the outer lip arched, acute; columella forming a single fold at the upper end, flexuous and longitudinally grooved near the lower extremity.

A species which has been long well known as an inhabitant of the British coast; we have never heard of its occurring on any other. Leach in his MSS. has elevated it to the rank of a genus under the appellation of *Simnia*, and in my work on the Genera of Shells I have expressed some doubt as to the propriety of placing it with the *Ovula*, from which it seems naturally separated by the sharp edge of its outer lip: there is, however, another species which serves to connect it closely with the *Ovula*, namely, Lamarck's *O. acicularis*, it therefore appears desirable to give it a place among them. Without venturing to express an opinion respecting its proper place in a Natural System, I may still direct the attention of the reader to the similarity existing between this shell and the *Bulla Naucum* and *cylindrica*. It seems to a certain degree naturally to connect the genera.

#### OVULUM HORDEACEUM. Fig. 53.

*O. testâ oblongâ, subcylindricâ, utrinque subacuminatâ, castaneo-rubrá; dorso posticè subangulato, labio externo crenulato.*

*Ovula hordacea, Lam. Anim. sans vert.* VII. p. 369.

*Hab.* in littoribus Africanis? In Mus. Hist. Nat. Paris.

**DESC.** Shell oblong, nearly cylindrical, rather acuminate at both extremities, of a chesnut colour, upper part of the back rather angular.

Drawn and described from the only specimen I have been able to see, in the Museum at the Jardin des Plantes, at Paris. It is in bad condition, and does not agree in all respects with Lamarck's description.









DIVULUM.







## PANDORA.

Lamarck, *Hist. Nat. des Anim. sans vert.* V. p. 498.

Sowerby, *Genera of Shells*, No. II.

*Testa transversa, inæquivalvis, inæquilateralis, latere postico longiore; valvâ alterâ planâ, margine postico superiore deflexo, dente unico, oblongo, obtuso, antico; alterâ depresso-concavâ, edentulâ. Ligamentum internum, cicatriculæ elongatæ in utrâque valvâ affixum. Impressiones musculares in utrâque valvâ duæ, distantes, laterales.*

*Species nonnullæ in valvâ planâ laminam internam, submarginalem, posticam, ab umbone usque ad impressionem muscularem posticam, decurrentem habent.*

Shell for the most part transversely oblong, inequivalve, inequilateral, the posterior side being the longer, and slightly gaping at its extremity.\* One of the valves is flat, its posterior and upper margin turned inwards, and having a single, oblong, obtuse tooth on the anterior side of the hinge; the other valve is depresso-concave, without teeth; but an indistinct cicatrix or mark, against which the tooth of the flat valve lies when the valves are closed. Ligament internal, fixed to a rather lengthened cicatrix or scar in each valve, inclined towards the posterior end of the shell.

Several of the species have in the flat valve an internal, submarginal lamina, diverging from the umbo to the posterior muscular impression. It is observable, that Lamarck gives two teeth to the flat valve of this genus, but as he has not mentioned any one of the species that have the above-mentioned lamina, he is evidently mistaken. In all the species of this genus the ligament may properly be said to be divided into two portions, the first, and generally the larger attached to the cicatrices in both valves, and to the posterior part close to the umbo of the tooth in the flat valve; the second, and the smaller in some species, attached in the flat valve near to the posterior side of the cicatrix, and in the concave valve to the posterior edge close to the umbo: in the *P. flexuosa* this second part of the ligament is much the larger, and is attached to the above-described elongated lamina. Muscular impressions two in each valve, distant, lateral. The mantle is attached by an interrupted impression, without any sinus.

This remarkable genus appears to be related to the Anatinæ and Corbulæ: to Placuna and Tellina I do not discern even the slightest proximity. A single fossil species has lately been discovered in the *Calcaire grossièr*, it is described by Deshayes in his Work on the Fossil Shells of the Environs of Paris. Two recent species only have been described by Lamarck, both of which are found on our coasts; a third, namely, the *P. flexuosa*, from the Red Sea, has been long known to us, and I now add descriptions and figures of four more from various localities. In an Appendix to a Catalogue of Shells collected in the Australian and Polynesian groups of Islands, by Mr. S. Stutchbury, I have described, under the name of *P. brevis*, a shell which I am now convinced is rather an Anatina, inasmuch as its flat valve is destitute of the blunt

\* In my work on the Genera of Shells, I have, by mistake, spoken of this as the anterior side, in the instance of this and some other genera.

tooth which characterizes the Pandora; it differs also from them in having a sinus in the muscular impression of the mantle, and in being possessed of a small testaceous appendage attached to the ligament.

### PANDORÆ GENERIS CLAVIS ANALYTICA.

1	{ laminâ submarginali in valvâ dextrali conspicuâ 4 laminâ submarginali in valvâ dextrali nullâ 2	
2	{ testâ posticè angustiore 3 testâ posticè dilatâtâ . . . . . 1 obtusa.	
3	{ oblongâ, margine superiore subarcuato, recurvo . . . . . 2 rostrata. elongatâ, margine superiore rectiusculo . . . . . 3 oblonga.	
4	{ testâ posticè dilatâtâ . . . . . 4 depressa. testâ posticè æquali vel angustiore 5	
5	{ testâ posticè æquali . . . . . 5 glacialis. testâ posticè angustiore 6	
6	{ testâ subventricosa . . . . . 6 flexuosa. testâ depressiusculâ 7	
7	{ posticè subrostratâ, margine superiore postico rectiusculo . . . . . 7 Unguiculus. posticè rostratâ, margine antico superiore alato . . . . . 8 nasuta.	

#### PANDORA OBTUSA. Fig. 1 to 3.

*Leach, MS. ined. Lam. Anim. sans vert. V. 499.*

*P. testâ latere postico elongato, dilatato; marginè superiore recto, dente in valvâ planulatâ minimo; long.  $\frac{8}{10}$ , lat.  $\frac{2}{10}$ , alt.  $\frac{9}{10}$ , poll.*

*Hab.* in Mari Britannico, juxta littora.

**DESC.** Shell ovate, anterior side very short, slightly angular at the upper part, and rounded beneath, narrower than the posterior, which is much lengthened and dilated; the upper posterior margin is nearly straight and angular at the end; upper edge of the flat valve lapping over the concave valve.

Formerly described and figured by Pennant as a new and singular *Mytilus* found near Weymouth: it occurs rather rarely all along the south-western coast of England.

#### PANDORA ROSTRATA. Fig. 7 to 9.

*Lam. Anim. sans vert. V. 498.*

*P. testâ oblongâ, latere postico elongato, obtusissimè bicarinato; dente unico in valvâ planulatâ parvo, retuso; margine superiore subarcuato recurvo; long.  $1\frac{4}{10}$ , lat.  $\frac{3}{10}$ , alt.  $\frac{7}{10}$ , poll.*

*Syn.* Pandora margaritacea, Lam.

Tellina inæquivalvis, Linn.

*Hab.* in Mari Britannico, juxta littora.

**DESC.** Shell thin, oblong, posterior side elongated, with two very obtuse keels near the upper edge, somewhat beaked, and slightly truncated; tooth in the flat valve small and blunt; hinge margin slightly arched, recurved.

Common on the shores of Guernsey, Jersey, and Normandy; occasionally dredged at Weymouth, with the *P. obtusa* of Leach, from which it is distinguished by its posterior side being narrower and rather beaked.

#### PANDORA OBLONGA. Fig. 10.

*P. testâ elongatâ, latere postico subrostrato, margine superiore rectiusculo, dente in valvâ planulatâ ligamentoque minimis; long.  $1\frac{1}{10}$ , lat.  $\frac{2}{10}$ , alt.  $\frac{9}{10}$ , poll.*

**DESC.** Shell proportionally longer than *P. rostrata*, thin, the posterior side rather beaked, with two very obtuse keels, and

the hinge margin nearly straight; the ligament and the tooth in the flat valve very small.

This species differs from *P. rostrata* in being thinner and more transparent, and in the ligament and tooth being smaller. One specimen was found in Mr. G. Humphrey's collection, labelled "from Gamberoon."

#### PANDORA DEPRESSA. Fig. 11 and 12.

*P. testá ovatá, depressá, latere postico dilatato, dentibus in valvâ planulatâ duobus validis, in valvâ alterâ unico maximo, margine superiore subarcuato, leviter recurvo; long.  $1\frac{1}{10}$ , lat.  $\frac{3}{20}$ , alt.  $\frac{8}{10}$ , poll.*

*Hab.* in littoribus Insularum Maris Pacifici.

**DESC.** Shell ovate, more depressed than the other species; posterior side dilated; valves nearly equally flat, two distinct teeth in the flatter, and one very large in the deeper; dorsal edge somewhat arched, slightly recurved.

Very few specimens of this species, all of them much worn, were found among Mr. G. Humphrey's stock; they have apparently been worn down as if they had been used as ornaments.

#### PANDORA GLACIALIS. Fig. 4 to 6.

*Leach in Capt. Ross's Voyage.*

*P. testá anticè subproductâ, obtusè angulatâ, umbone subcentrali; margine superiore rectiusculo, dente in valvâ planulatâ minimo.*

*Hab.* in Mari boreali. In Mus. Brit.

**DESC.** Shell nearly oval, the upper margin nearly straight; anterior side rather produced, obtusely angular; beak nearer the centre than in *P. obtusa*; tooth in the flat valve very small.

#### PANDORA FLEXUOSA. Fig. 13 to 15.

*Sowerby in Genera of Shells, No. 2.*

*P. testá oblongâ, gibbosiore, subrostratâ; margine inferiore flexuoso; superiore bicarinato, subarcuato, recurvo; laminâ internâ submarginali, posticâ, elongatâ, in valvâ planulatâ: long.  $\frac{7}{10}$ , lat.  $\frac{1}{10}$ , alt.  $\frac{3}{10}$  poll.*

*Hab.* in Sinu Arabico. Mus. Goodall, nostr. &c.

**DESC.** Shell oblong, rather more gibbose than in general, posterior side elongated, subrostrated; lower edge flexuous, upper bicarinated, rather arched and recurved; a rather short tooth and an elongated, internal, submarginal plate, on the posterior side in the flatter valve.

From the Red Sea.

#### PANDORA UNGUICULUS. Fig. 16 and 17.

*P. testá oblongâ, depressiusculâ, posticè subrostratâ; margine superiore rectiusculo, extus obtusè bicarinato; anticè rotundato, vel subtruncato: long.  $\frac{6}{10}$ , lat.  $\frac{1}{10}$ , alt.  $\frac{3}{10}$  poll.*

**DESC.** Shell oblong, rather depressed, posterior side narrower, rather produced, upper margin nearly straight, with two obtuse keels running from the umbo to the end of the beak: anterior side rounded or subtruncated. Never having seen the flatter valve of this species, I can only state, judging from analogy, that it probably has a tooth and an elongated, submarginal lamina within on the posterior side. Locality unknown.

#### PANDORA NASUTA. Fig. 18 and 19.

*P. testá elongatâ, flexuosâ, posticè rostratâ, margine superiore posticè arcuato, recurvo; anticè subalato; dente valido, et laminâ internâ submarginali, posticâ, elongatâ, in valvâ planulatâ: long.  $1\frac{3}{10}$ , lat.  $\frac{5}{20}$ , alt.  $\frac{6}{10}$  poll.*

**DESC.** Shell rather lengthened, deeper valve with a flexuous margin; posterior side of both valves beaked, their upper edge arched, recurved, anterior upper edge with a small projecting wing-like appendage; a distinct tooth and an internal, elongated, submarginal plate in the posterior side of the flatter valve. Two obtuse, rather obsolete ridges pass from the umbones along the upper posterior edge on the outside of both valves.

Apparently a very rare species, with whose locality I am entirely unacquainted; if the specific name *rostrata* had not been previously occupied, I should have applied it to this as being more expressive than the one adopted.





PANDORA.

